American Aviation

The Independent Voice of American Aeronautics

FEBRUARY 1, 1943

The Negative Approach

Fortnightly Review

THERE must be something about air cargo enthusiasts that irritates conservative transportation men and provokes them into making long documented speeches which start out to prove the airplane isn't here to stay and end up with a warning to railroads that they had better get into the air transportation business, or at least to protect their interests against encroachments by the airplane.

Stated another way, the super optimists have by indirection driven the conservatives into spending more time talking about the restrictions and the limitations of the airplane than in heralding the new freedom granted to mankind by his conquest of the air. The approach is tending to become a negative one with the net result that the men in the air transport organizations are beginning to question even their own enthusiasm for a new mode of transportation in which so many benefits, advantages and opportunities are inherent.

As reported in *American Aviation* for January 15, Mr. L. K. Sillcox, first vice president of the New York Air Brake Company, a railroad supplier, delivered an address recently on "Flying Freight" at the Harvard University Graduate School of Business Administration. Approaching his subject from the railroad point of view, naturally enough, Mr. Sillcox ably and carefully devoted the bulk of his address to pointing out the limitations of air transportation in the carrying of freight.

By the time we had read some forty pages of text and statistics, we were about to throw up the sponge and get out of the aviation business. At least it seemed that air transportation is to be largely limited to war-time emergencies, a restricted amount of specialized air express, and some left-over passenger business.

But in his closing remarks Mr. Sillcox inserted a punch line that offered a ray of hope for the future. After proving that the airplane could not possibly compete with rail freight, he warned the railroads that they "should be prepared to engage in the flying of freight when the time comes that that service is the most economical and they should lay well-conditioned plans now and not repeat their errors in judgment which produced a false

(Turn to page 8)

Harris & Ewing

Heads Air Committee

Adolph A. Berle, Jr., Assistant Secretary of State, Looms As a Factor in Forming U. S. Air Policy for the Postwar Period

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Late Bulletins

Chamber Reorganized

Basic reorganization of the Aeronautical Chamber of Commerce of America was agreed upon at its annual meeting in New York on Jan. 22, and many of the complex problems which have plagued the group were cleared up.

General Chamber activities are to be considerably streamlined. Membership on the board of governors was reduced from 32 to 15, with more representation for airframe manufacturers. Under the reorganization, it will be necessary to elect a new board and new officers.

Most of the companies which had resigned were reinstated; all rules were waived to make this possible.

Robert P. Newton, senior vice president, resigned effective Jan. 22, and Irving Taylor, who has been secretary, was named manager pro tem.

A committee of six was appointed to put the reorganization plan into effect.

Trend of The News

Glider Industry Stymied : The Army Air Forces will terminate glider training shortly, according to Capitol Hill sources. What happens to glider production next? Apparently even the Army hasn't decided. Meanwhile, some 10 prime contractors, along with leading subcontractors to the new and once enthusiastic glider industry, met quietly a few days ago to compare notes. They feel terrible. They are dissatisfied with Army's administration of the program, have tried and failed to get approval to re-design the ships they are building, yet are handed change orders wholesale, and wonder if stockholders will hang on through the present uncertainty. There is serious questioning whether the airborne troop commands will even accept the ships. That would open the way for cancelation of contracts right and left. AAF officers, on the other hand, are still heard criticizing the producers for sloppy, inefficient products.

183 Wartime Airlines : So you think the war has shut down the world's commercial airlines? You'll be surprised at figures soon to be released by the Commerce Department's flourishing new Office of Air Transport Information, under William A. M. Burden and J. Parker Van Zandt. There are now records of 183 non-military, public, scheduled air carriers all over the globe.

Howard Hughes' Plans : Howard Hughes, millionaire tool manufacturer, partner of Henry Kaiser in cargo plane production, aircraft engineer in his own right, holder of the round-the-world flight record, and majority owner of TWA, has post-war plans for international airline operation that would surprise even the more ambitious dreamers.

CAP Wobbling : The Army has asked high OCD officials how much noise would be made if AAF were to demand full control of Civil Air Patrol. At this early stage the matter isn't being pushed but Washington observers think it won't be long before it is. Present general attitude of AAF officers is one of condescension. Like CPT, it's described as rather "bothersome," although granted it is doing a "nice" job. Both CPT and CAP probably would have been shut off long ago without the powerful support both have had in some civilian circles.

Midwest Council Unlikely : Although early plans encompassed three Aircraft War Production Councils, a midwest group now seems improbable. Lack of common interests due to geography and variation in plane types produced, the cooperation already enjoyed in certain areas such as Wichita, and the fact that a number of midwest plants are run by firms already members of the East or West Coast Councils are factors.

Trend to Watch : Close observers at WPB point out that Charles E. Wilson still stands alone on aircraft, while T. P. Wright has the whole Army and Navy behind him. Although the entire aircraft administrative set-up is technically subject to Wilson's okay, he was not shown Wright's first organization chart of the Aircraft Resources Control Office until

(Turn to page 6)

20c

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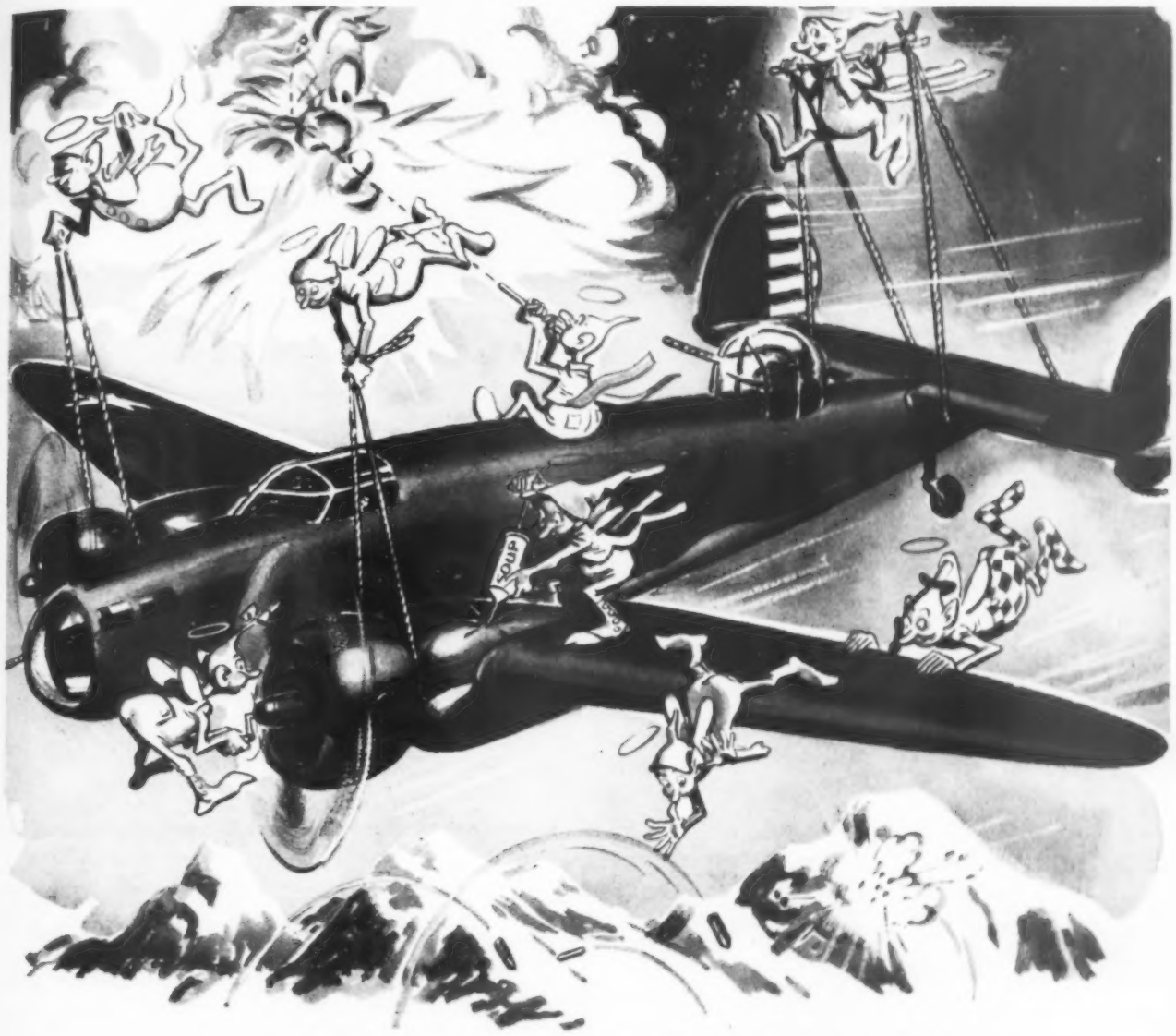

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We're the gremlins that make one engine do the work of two when a bit of ack-ack washes out a motor over Naziland.

We're the gremlins that stave off a stall when your student hangs the plane on its prop.

We're the gremlins that keep you in the air when the bad gremlins put ice on your wings.

We're the gremlins that take you upstairs to get a son of the rising sun before he lays an egg on your flat-top.

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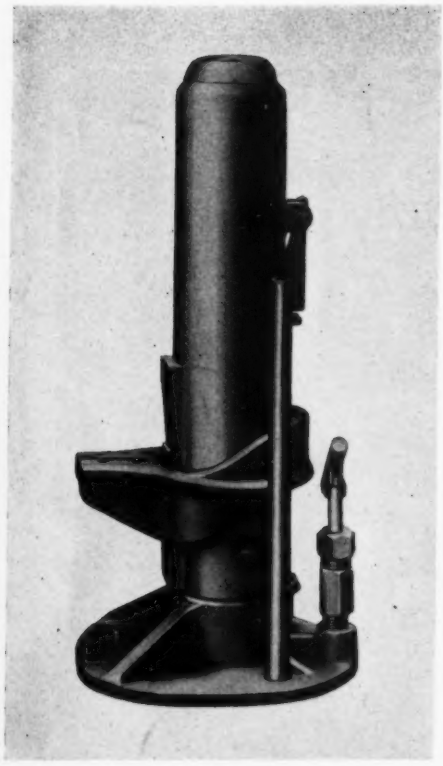

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American Aviation

Vol. 6, No. 17 February 1, 1

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Published the 1st and 15th of each month by American Aviation Associates, American Building, 1317 F Street, NW., Washington, D. C. Printed at The Telegraph Press, Cameron and Kelker Sts., Harrisburg, Pa. Entered as second class matter at Washington, D. C. and Harrisburg, Pa.

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PUBLISHING CORPORATION: American Aviation Associates, Inc., Wayne W. Pa President; Col. Albert H. Stackpole, Vice-President (in active military servi Brig. Gen. E. J. Stackpole, Jr., Secretary-Treasurer (in active military servi

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PUBLICATIONS OF AMERICAN AVIATION ASSOCIATES, INC.:

AMERICAN AVIATION: Subscription rates for U. S., Mexico, Central and So Ameriean countries—$3 for 1 year; $4 for 2 years; $5 for 3 years. Canad $3.50 for 1 year; $6.50 for 3 years. All other countries—$4.50 for 1 ye $9.50 for 3 years. Member of Audit Bureau of Circulation, Associated Busi Papers, Inc., and Advertising Federation of America.

AMERICAN AVIATION DAILY: Published six days each week except holidays; dispatc by air mail. A comprehensive newsletter covering daily developments in av tion. $15 per month; $85 for six months; $170 per year. Group company ra on request. Service Bureau available to all subscribers. CONRAD CAMPBELL, *Managing Editor.*

AMERICAN AVIATION DIRECTORY: Published twice a year, spring and fall. Comple reference data on administrative and operating personnel of airlines, manu facturers, accessories firms and their products, organizations, schools and la operators, Federal and state government agencies concerned with aviation a related aviation interests in the U. S., Canada and Latin America. Single co $5; Annual subscriptions, $7.50. Discounts on quantity orders. Distributi of Fall-Winter edition now being made. Next edition scheduled for Apr HELEN L. WALSH, *Managing Editor.*

XUM

"ROLLING HOME FROM RIO"

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Illustrated:
Martin PBM (*top*)
Consolidated PB2Y (*right*)

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Trends

(Continued from page 1)

nearly two weeks after it had been approved by AAF's Gen. Myers and Navy's Adm. Pace. (ARCO has been officially described by WPB as agent for the AAF and Navy Bureau of Aeronautics.) Meanwhile, Wilson still has not built up the strong personal staff he will require.

Postwar Leader? One of the aviation giants to watch closely from now on for tips on preparations for postwar is Victor Emanuel's Aviation Corp. Its wide manufacturing cntrol is seldom realized —Consolidated, Vultee, Stinson, Intercontinent, American Propeller, Republic Aircraft Products, Spencer Heater, Northern Aircraft Products, Auburn Central Manufacturing, Lycoming, Liquid Cooled Engine Division. That means airframes, propellers, accessories and liquid and air-cooled engines. And remember its interests in Pan American Airways and American Airlines. And to complete the record, it owns New York Shipbuilding Corp., and at last report an important stockholder was General American Transportation Corp., which manufactures and leases railroad tank and refrigerator cars.

Lightplanes Win Friends: Manufacturers of small planes are happily bewildered by the support they are receiving from Army officers who do their fighting on the ground. One of the few strong proponents of the lightplane in upper military circles is not in the Air Corps at all, but Lieut. Gen. Lesley J. McNair, commanding general of the Army Ground Forces. Latest reason why things are looking up for the putt-putts is the arrangement McNair has made with Gen. Arnold to put on soon a month-long secret, grueling, decisive test at an unnamed air base somewhere inland to determine fairly everything the grasshopper can do in warfare. McNair and his staff are said to be so enthusiastic already that they have plans for buying thousands of baby planes for artillery spotting, general reconnaissance, courier and communication services, and they see other possibilities too.

Airlines Scare the Railroads: Railroaders are saying harsh things about air transportation but they're aroused to its possibilities. W. A. Patterson's recent semi-debunking of air cargo's future is described as generous and even scientific, but they point out that people still the motor truck is not efficient economically. Yet it's diverting pl traffic from the rails. Aviation will compete by political methods, *Age* complains, and it even resents recent "socialistic" and toney ad have been run by Pan American and American. Commenting on for thousands of airplanes which can be converted to war overnight magazine says "If 50,000 commercial planes are to be maintained military aid in event of war, then surface transportation to replace planes when they go to war is just as important a military concern a planes themselves. . . . Where is the money coming from to compe surface transportation for maintaining such standby capacity—esp if, as most air transport promoters insist, surface transportation are to be forbidden the opportunity themselves to engage in air transp

No Eclipse for ANMB: Ferdinand Eberstadt is not permi the Army-Navy Munitions Board to waste away. It's more powerful ever. He has recently issued an unpublicized directive that priority ra shall be approved by the Board before they can be issued by W Previously, all ratings were okayed and issued by Ernest Kanzler cently dismissed WPB Director General for Operations. (Auguste Ri is new chairman of ANMB. He was formerly president of Pacific Mills,

Washington Sidelights: Latest report on Air Trans Command's fight against AAF's new Transportation Organization is a t porary victory for ATC. Subject to further decision, the new Dire of Traffic & Transportation can make policies for all AAF units ex the ATC. . . . Labor unions are asking why WPB's new Aircraft P duction Board has no Labor Advisory Committee, as do all regular W industry divisions. . . . Army now permits CAB to release all mon statistics on airline traffic and finances except those on military c tracts. . . . Senator McCarran's appointment to Senate Commerce C mittee probably will mean that this group will give more attention to bills. For years he has tossed bills in the hopper and they were n heard of again.

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Editorial

(Continued from page 1)

sense of competitive security until considerable passenger and freight volume had turned irretrievably to the highway bus and truck, respectively." It is noteworthy that Mr. Sillcox did not say *"if"* the airplane becomes the most economical method, but *"when."*

Earlier in his address Mr. Sillcox stated: "When no authority in the aviation industry estimates that ton-mile flying costs can be reduced with any currently projected airplane design to the maximum rate borne by any commodity transported by rail in carload lots, it is extremely difficult to share the enthusiasm displayed in some quarters and publicized in the public press that the airlines will make serious inroads into carload freight traffic following the present war."

Like others before him, Mr. Sillcox is endeavoring to place an air cargo pattern on top of an existing and relatively efficient rail transport pattern within the United States, and quite naturally the figures simply don't jibe. As he amply demonstrated in his speech (and we don't quarrel with the figures he used), ton-mile costs of known air cargo planes are so much higher than those of existing rail ton-mile costs as to make purely statistical comparisons meaningless.

Airlines are looking forward to the day when they can operate for 18 cents a ton-mile, all costs included. The railroads receive less than 1 cent per ton-mile for 49.4 per cent of the carload ton-miles produced, representing 33.5 of their total freight revenue from that service which in itself comprises approximately 90 per cent of all freight operations. The gap is indeed wide, even considering the fact that the low ton-mile charges of the rails do not represent an economical or profitable basis in peace-time.

As we have stated before, we don't believe the future of air cargo, at least in the foreseeable future, rests upon a *competitive* pattern. There are new trade fields to pioneer and conquer. If the future of the cargo airplane depended merely on competing with a railroad between New York and San Francisco, it would have a dull future indeed.

Most of the critics seem more inclined at present to point out (with great pains and volumes of statistics) the limitations of the airplane, rather than to exploit the tremendous benefits and opportunities this new air vehicle in the air ocean can (and will) bring to mankind. Are the critics afraid of what the airplane portends? Must the future be geared by a negative, rather than a positive and exploratory, approach?

Isn't it a little strange that in this great land developed by ideas, initiative, hard work, and faith, a land that has known only the word "forward," to find those who are taking a hesitant approach to the greatest transportation development man has ever known?

Doesn't it seem odd that we are finding all of a sudden a preponderance of attention to the *disadvantages of the airplane as a competitor,* when all the time we thought the airplane was a brand new mode of transportation in a brand new air ocean by which the world could be shrunk into a single community, by which man could rise from the smoke and grime and tediousness of dirty railroads, and by which industry could be decentralized for the welfare of the citizens as a whole? What has happened to the pioneering spirit, the will to conquer new fields and the desire to improve the lot of the nation?

No, the answer to the future of the airplane is not to be found in the world of the statistician, for statisticians have been able to prove there was no future in automobiles, safety razors, toothbrushes, moving pictures, public schools, bathtubs—and even railroads! Even the 1943 network of airlines was "impossible" of achievement.

But salesmanship, invention, initiative and the vision of the future has brought America material and spiritual wea[lth] couldn't be measured by statistical estimates. That [im]urable imponderable known as public demand, and the [dy]force of inspired leaders who have confidence in their [pro]or services, are the answers. The ever-upward curve of a[ir] portation will continue upward. The age of pioneering [is] over by any means.

Time for Getting Smart

AT last the United States is beginning to study inter[na]air policy. The President has designated an inter[de]mental committee to delve into the weighty problems of [to]and tomorrow. What will be our position with regard to [in]national airlines? To what extent can "freedom of the [air]achieved? Shall the world's air routes and commerce be [op]to all, or restricted to a few government-owned or govern[ment]sponsored systems? The problems are enormous. Air [po]will doubtless be the dominant problem of the peace table.

We have no quarrel with the men named on the com[mit]for each is concerned with international aviation in some [ca]or another. But we are discouraged to find the committee [is]posed entirely of government men. Few, if any, have any [di]knowledge of air transportation. The committee should [be]certainly be augmented by a group of practical airmen. [If] committee is to be a closed corporation of government [off]the results cannot be too hopefully looked for.

In addition, two very important government bureaus [are] omitted and they hold the key to efficient development of [in]national air transport after the war. One is the Bureau [of] Customs of the Treasury Department, and the other is [the] Immigration and Naturalization Service of the Department [of] Justice. The omission of these bureaus is a further illustrat[ion] that this country is a novice in international air transport. [All] of the international agreements and all the peace treaties in [the] world can be made partially ineffective by the failure to inclu[de] customs and immigration officials in all international aviati[on] conferences. The time to include them is not when internation[al] air transport begins to function, but now. The lack of unde[r]standing of this new medium of transportation by customs a[nd] immigration men has hindered its smooth operation in eve[ry] country in the world.

The importance of the interdepartmental committee can[not] be over-estimated. The British are well aware of the pote[n]tialities of air transportation, indeed, the British are 'way ahe[ad] of us in thinking and planning. So are the Dutch, also ho[me] traders with commerce as the cornerstone of their country['s] existence. On our part we have been abominably bad inte[r]national traders. It is probably more indifference than me[re] stupidity, for our economic development has been internal an[d] domestic rather than dependent upon international commer[ce]. But this country was the birthplace of the airplane; this country has built the greatest aircraft productive facilities. We shou[ld] take our place in international air commerce. The President['s] committee is assuming a weighty responsibility for protecti[ng] the nation's interests in the air ocean.

Another Transport Achievement

THE British have now revealed the secret of the extended supply lines in the westward drive from Egypt. It's the faithful transport airplane, this time the Lockheed Hudson which has achieved new heights of performance over the desert sands.

In the most spectacular single operation, transport planes "lifted" an entire fighter force—including stores, tents, ground

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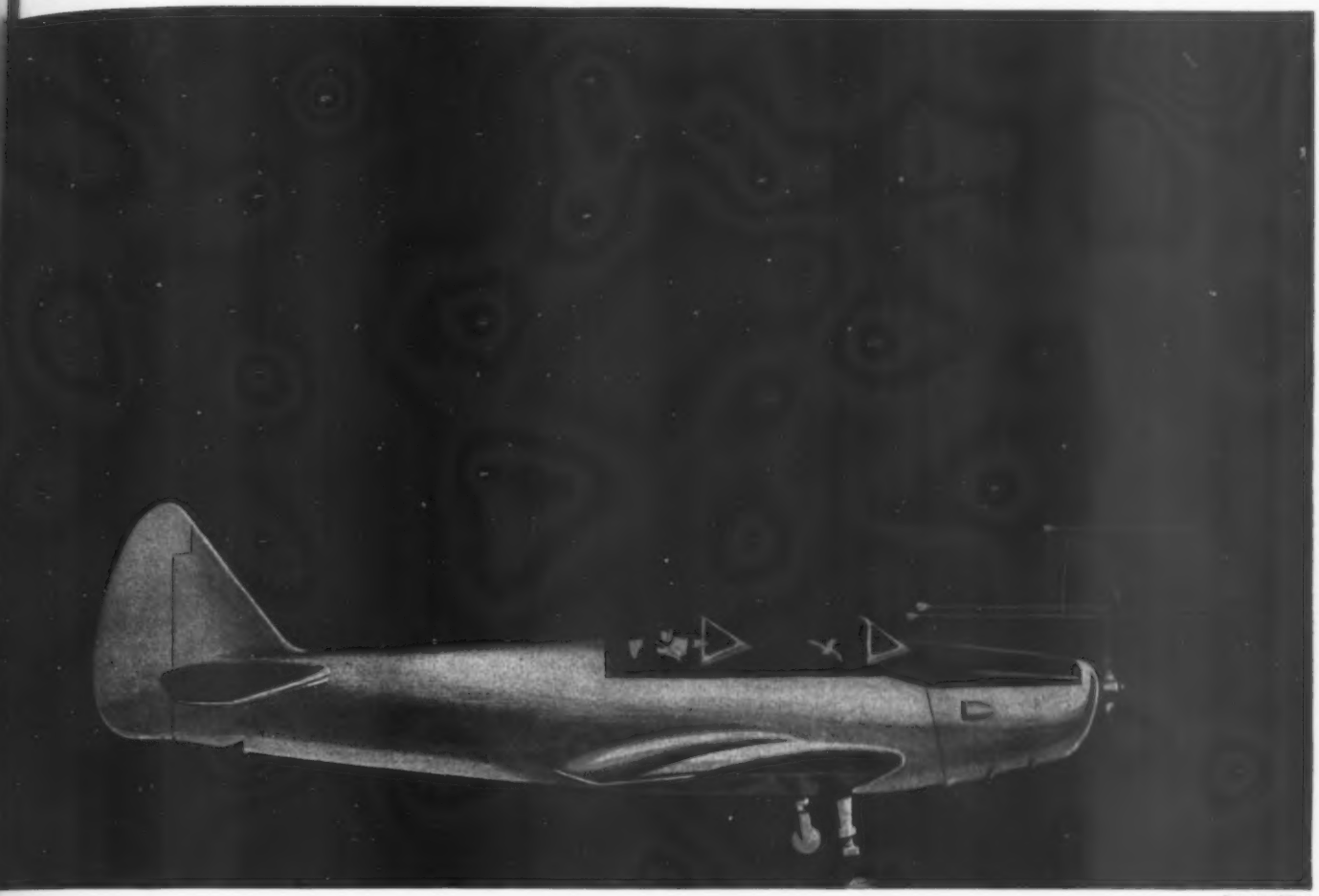

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Editorial

(Continued from page 8)

personnel, motor cycles—and set it down on a landing [ground] well inside the enemy territory. From this desert hideout fighters were able to attack enemy transport columns as far as Benghazi and on the road to El Agheila, at a time when retreating Axis forces believed they were beyond the [reach] of single-engined aircraft.

Of special interest is the transportation of gasoline and [oil] a genuine achievement considering the conditions under which the operation was carried on. It is quite clear now that the headlong rush of the British Eighth Army westward was [made] possible because transport airplanes were supplying the [army] (and fighting planes) with everything from fuel to ammunition and rations. Remember the hectic battle in Washington over priorities for a few transport airplanes?

Prophesy in Retrospect

THE DEAN of the nation's aircraft manufacturers, Glenn Martin, has been one of the sound prophets of aviation. Twenty-four years ago on February 2, 1919, Mr. Martin gave an interview to the *Cleveland Plain Dealer* which is worth quoting today as a measure of air transport progress. Mr. Martin said:

"There are still those who scoff at the idea of commercial application of the airplane, in spite of remarkable development the war has brought. I mean operation in competition with other carriers—railroads and automobiles—at a profit. A most important and valuable application not yet encouraged is the carrying of passengers.

"The first immediate commercial application will be transporting aerial mail. Too much stress cannot be put on the importance of every city in the United States having in close proximity to its centers an aerial landing terminal. Inventors are at work on navigation instruments. I believe the solution will come through a development of the radio compass and radio communication."

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WAYNE W. PARRISH

Welcome Reductions

AT A TIME when almost all costs of all kinds are rising, passenger fare reductions to be instituted on March 15 to Latin America by Pan American Airways and Panagra are most welcome. We hope this first reduction of about ten per cent is but the first of a series of steps to bring international air transportation down to the level which the "average man" can afford to pay. Psychologically the reductions make for sound public relations at this time when the Civil Aeronautics Board is giving broad hints to the air transport industry that fare reductions are in order. Pan American's fares have always been substantially higher than those of the domestic airlines, and probably will continue to be above the domestic per mile level indefinitely because of operating cost differentials, but the downward trend is good news and a wholesome indication that lower operating costs are being passed on to the customers without delay.

The Civil Aeronautics Board's hints to the domestic airlines have been contained in every rate decision or show cause order issued during the past few months. It has said that passenger rates are being studied "and will be given early consideration."

Board officials feel that the time is ripe for a general fare reduction. They feel that such a move, initiated by the airlines, would be smart public relations. Some in the industry agree that now is the time; some don't. But regardless of opinion, if the time comes, as it may, when a *Board-sponsored* reduction appears imminent, the domestic airlines would be wise to follow in the footsteps of Pan American and Panagra, and beat the Board to the punch.

WAYNE W. PARRISH

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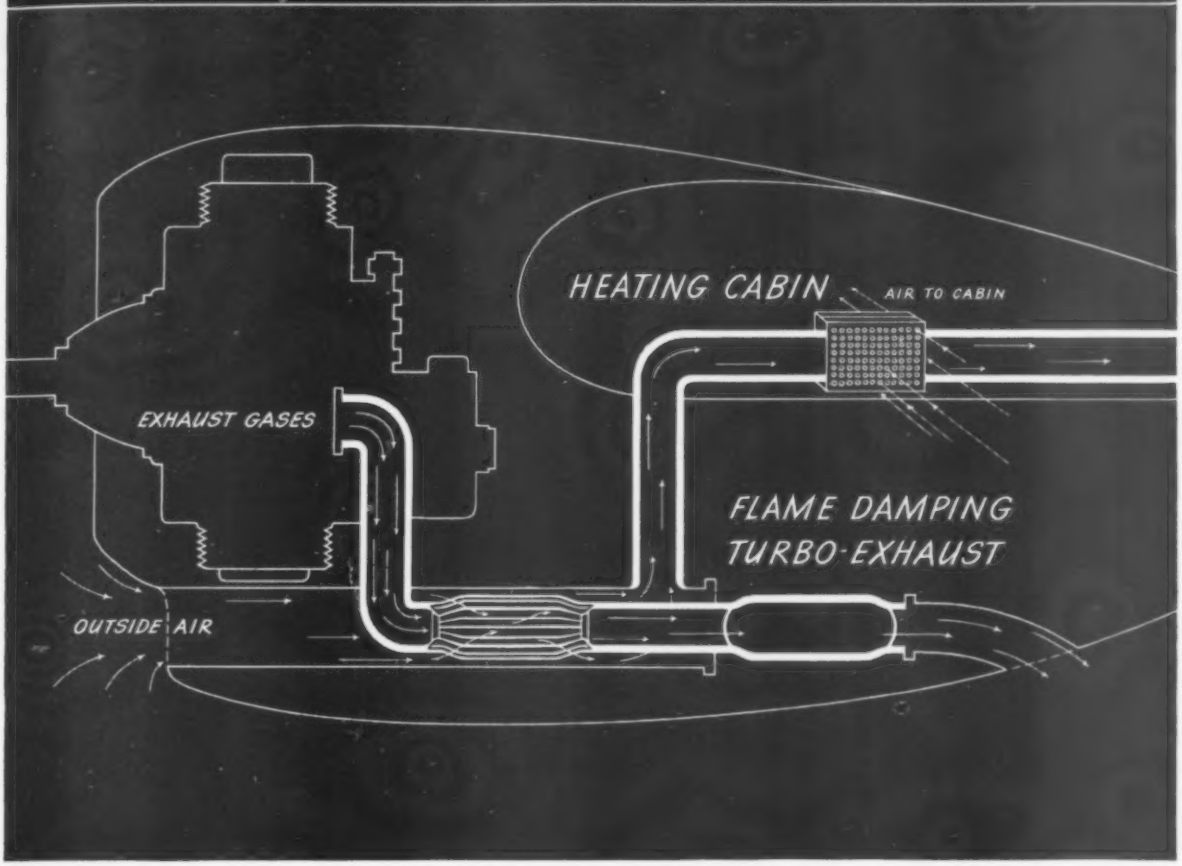

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American Aviation

U. S. Launches World Air Policy Study

FDR Orders New Group to Lay Postwar Plans

By WAYNE W. PARRISH

AT the personal direction of President Roosevelt, an interdepartmental committee has been formed to study international air policy and problems both for present needs and for the post-war period. It is the first step taken by the United States in preparation for meeting international air problems at the world peace table.

Existence of and membership on the committee were exclusively revealed Jan. 14 by *American Aviation Daily*.

Assuming the chairmanship of the group is the Department of State, the representative of which is Adolph A. Berle Jr., Assistant Secretary of State. Others on the committee are Robert A. Lovett, Assistant Secretary of War for Air; Artemus Gates, Assistant Secretary of Navy for Air; Wayne Chatfield Taylor, Under-Secretary of Commerce, and L. Welch Pogue, Chairman of the Civil Aeronautics Board.

Coy Serves

Of considerable significance in demonstrating the interest of the White House is the presence on the committee in an advisory capacity of Wayne Coy, director of the Office of Emergency Management and aid to President Roosevelt and long-time friend of Harry L. Hopkins.

A working committee has been established and held its first meeting Jan. 14. Mr. Pogue is chairman of this group, otherwise the membership differs from that of the top committee. Representing the State department is Thomas Burke, chief of the division of international communications. From the Department of Commerce is William A. M. Burden, special assistant to the Secretary in charge of aviation. The Army man is Col. Harold Harris, former vice president of Pan American-Grace Airways and now on the General Staff of the Air Transport Command. For the Navy is Lieut. Comdr. Malcolm Aldrich. Paul T. Davids, of the Bureau of the Budget, is secretary.

It is considered significant in Washington that the chairman of both the top and the working committees, Messrs. Berle and Pogue, are both advocates of a limited "freedom of the air" policy by which they want the air ocean opened to the air commerce of all nations with a minimum of artificial and man-made barriers.

Out of the committee, quite a few have had some association with aviation. Messrs. Lovett and Gates, both holding air records in World War I, have long been close observers of air transportation. Mr. Lovett, in particular, is one of the outstanding champions of air power in the United States and is highly regarded both inside and outside of the War Department.

Since joining the CAB as general counsel in 1939, Mr. Pogue has become familiar with air transportation and is likewise highly regarded both in and out of his organization. A liberal thinker, Mr. Pogue is well respected by the New Dealers although not considered one of the intimate members of the fraternity, and rarely seen in New Deal circles. Mr. Berle's knowledge of aviation is primarily academic.

On the practical side, Col. Harris has had a long background of practical international airline operation and holds a key spot in the present Army air transport operations both domestically and internationally. Little is known of Comdr. Aldrich. Mr. Taylor in the Department of Commerce is more or less of a nominal appointee because of his position, but Mr. Burden has long had an intimate knowledge of some phases of air transportation and is deeply interested in the subject.

Formation of the group—which apparently has no actual identifying name at present—came as the result of stirrings in Britain with regard to post-war civil aviation, in addition to mounting current problems with respect to U. S. operations abroad. Several aviation leaders in the U. S., notably Juan T. Trippe, president of Pan American Airways, and Croil Hunter, president of Northwest Airlines, have been pleading for action by this government. This country has been notably lacking in any semblance of international air policy and many of the current problems, it is felt, will not wait until the end of the war for solutions. Many have felt that this is the time to lay the patterns for post-war aviation.

Among the many perplexing problems that have arisen are those pertaining to Army operations. Permits have been granted by certain foreign governments for Army transport planes to operate through their countries, but these permits expire at the end of the war, leaving nothing gained in the way of commercial concessions. This is true both in Africa and in Canada.

Meanwhile there are current reports in Washington, whether true or not, that Great Britain has been playing its cards smoothly for post-war air transport benefits, and the Caribbean transport situation has been cited as one example where the British stand to gain materially at our own front door. Apparently in Africa the British have protected their franchises very well. Canada, too, has been active in laying plans for the future and because of its strategic northerly situation, that country holds the key to much of the post-war commercial ambitions of U. S. airline operators.

The British seem to be leaning toward a "freedom of the air" policy, although to date they have not been very liberal in granting commercial flying concessions to other nations, especially the U. S. There are some officials in Washington who are very frank in saying that a "freedom of the air" policy is merely a dream not susceptible of fulfillment in a realistic world of born traders. Russia, for example, is a complete enigma as far as flying concessions are concerned. Most small countries want a "freedom of the air" policy while the contrary seems true of countries with large land areas under direct control.

Study Postwar Aviation

The Canadian Air Industries and Air Transport Association has under active study postwar trends and plans, according to reports from Canada. The association, an outgrowth of the old Air Transport Association, represents aircraft manufacturers, Trans-Canada Air Lines and Canadian Pacific Air Lines. Both domestic and international air routes are being studied, it was said.

Agreements Revealed

Knowledge that certain agreements already existed between Great Britain and the United States was revealed for the first time in London Dec. 17 when Captain Balfour, Under Secretary of Air, told Parliament the following, as quoted in *The London Times:*

"Capt. Balfour said that the position regarding the air routes taken over by the United States for military purposes during the war was well understood. The British Government had agreed on the highest level with the American authorities that in regard to routes run by them for military purposes during the war and which might have a commercial value in peace-time, all bets would be off after the war."

During the Parliamentary discussion, a number of M.P.'s were quite bitter in their criticism of the management and handling of British Overseas Airways Corporation, reflecting fears that Great Britain would be left at the post in the race for commercial routes and expansion. One Member referred to the British being forced to take "left-over" planes from America.

It was recently revealed that Lord Halifax, British Ambassador to the United States, and Mr. Trippe of Pan American Airways, and others, had discussed the need of establishing air policy patterns with President Roosevelt. His action in setting up the interdepartmental committee followed.

British Transport: The de Havilland "Flamingo," is one of Britain's few modern airliners. Members of Parliament have been expressing the fear that Britain may be left at the post in the race for commercial routes.

XUM

Revamped Civil Aeronautics Act Propose

Lea-Bailey Bills Make Airlines Defense Auxiliary

By ERIC BRAMLEY

A PROPOSED Civil Aeronautics Act of 1943—changing, enlarging and overhauling the Civil Aeronautics Act of 1938—was introduced in the House on Jan. 11 by Cong. Clarence Lea (D., Cal.) and in the Senate by Sen. Josiah Bailey (D., N. C.)

Under the proposed legislation, civil aviation would—in peacetime as well as in war—for the first time become by law a definite auxiliary to the armed forces.

The bills (H. R. 1012 and S. 246) extend vastly the scope of the present act by providing for regulation of "air contractors"—any person who undertakes to engage in interstate, overseas or foreign commerce otherwise than as a common carrier (an airline). Charter operators fall in this category.

The Lea-Bailey legislation also provides that:

1. The Civil Aeronautics Board and the Postmaster General shall make a report to Congress within one year concerning the matter of transporting by air all classes of mail whenever delivery thereof would be speeded.

Airport Program

2. The CAB shall make a report to Congress within one year, or as soon thereafter as possible, concerning post-war aeronautics, including, among other things, a study of air cargo.

3. The Administrator of Civil Aeronautics shall be required to prepare and maintain a comprehensive development program for airports and other air navigation facilities.

4. The Administrator shall be given the power to zone areas adjacent to airports and otherwise to regulate the height of structures that may interfere with aerial navigation.

5. CAB shall see to it that regular air transportation is furnished between the continental United States and territories, possessions and other places in which the U. S. has an interest.

6. Section 404 of the present act shall be amended so as to extend to foreign air transportation the duty to furnish reasonable service at reasonable rates.

7. States shall not regulate air commerce.

8. There shall be no multiple taxation of air carriers and air contractors by the states.

9. The present definition of "air carrier" shall be amended so as to make clear beyond argument that a forwarder is included in that definition.

10. The present definition of "air commerce" shall be amended so as to include all aerial navigation.

11. The present definition of "interstate air commerce" shall be amended so that it is not limited to commerce between points in different states, but would include commerce between points in a single state.

12. There shall be put into the act on a permanent basis the provisions of the Civilian Pilot Training Act.

13. Empowers CAB to issue a temporary certificate to an applicant even though the applicant has not applied for a temporary certificate; but the applicant is permitted to reject such a certificate.

14. CAB shall be empowered to issue a permit to a foreign air carrier without a hearing and without findings if there is an international agreement providing for service by that carrier.

15. CAB shall make unlawful provisions of agreements between airlines and forwarders or others indirectly engaged in air transportation where the CAB finds such provisions to be contrary to the public interest.

16. CAB shall have administrative power over rates in foreign air transportation and over minimum rates of contract carriers.

17. Pilots and co-pilots shall be authorized to impose restraints on passengers and to jettison cargo where necessary for safety.

18. There shall be a new act entitled "The Air Carriers Liability Act," regulating an air carrier's liability to passengers and shippers.

The bills make air transport an auxiliary to the armed forces by instructing the CAB to consider as being in the public interest "the encouragement and development of an air transportation system properly adapted to the present and future needs of the foreign and domestic commerce of the United States, of the Postal Service, and of the national defense, and so located, equipped, and staffed that it may serve as an adequate auxiliary to the armed forces in time of national emergency both within and without the continental limits of the United States . . ."

In dealing with "air contractors," the bills instruct the Board to consider as being in the public interest "the encouragement of the transportation of persons and property by air contractors in order to foster a market for aircraft manufacturers, in order to promote skill in the operation and maintenance of aircraft, in order to develop new and additional uses for and types of aircraft, and in order to provide facilities for transportation by air supplementary to the air transportation system of air carriers."

The promotion and protection of interstate and foreign commerce by air and the conservation, promotion and development of civil aeronautics as a vital national asset for the national defense, national commerce, postal service and the general welfare "require the national regulation and promotion of the operation and navigation of all civil aircraft using the air space of the United States or in commerce to or from the United States, and the national regulation and promotion of all aeronautical enterprises involved in transportation by aircraft in such air space or commerce," the legislation stated.

Bans Multiple Tax

On taxation, an increasingly important item to the airlines, the bills said: "The multiple taxation of air carriers and of air contractors, or of their operations or properties, is declared to be contrary to the public interest. No state, territory or possession . . . or subdivision thereof shall impose or enforce any tax, assessment, fee, or levy upon any carrier or air contractor, or upon its operations or properties, in a manner, or on a basis, which results or is likely to result in multiple taxation or in a payment by any carrier or contractor of more than an amount fairly allocable to such state, territory or possession, having in view the operations, if any, of such carrier or contractor outside such state, territory or possession."

Although they had not had time to study the legislation thoroughly as this issue went to press, aviation officials agreed that at first reading it looked promising.

Definite expressions of opinion for or against will probably not be forthcoming until hearings are held. In the House, the Lea bill has been referred to the Interstate and Foreign Commerce Committee, which is expected to hold hearings soon. In the Senate, the Commerce Committee has the legislation, and no plans for hearings are known.

'Closed Sky' Conception Obsolete, British Paper Says

That the British are thinking in terms of a "freedom of the air" policy after the war is reflected in an editorial in *The London Times* for Dec. 18, 1942, which just reached this country, and which appeared in connection with the debate in the House of Commons over civil aviation.

"Certain things are already clear and others are becoming clearer," the editorial said in part. "The conception of the 'closed sky', which dominated civil aviation between the two wars, is obsolete. The claim to ownership of the space over national territory and the refusal of access to the airlines of another country unless a similar concession was made in return represented a narrow and cramping policy.

"It sprang from the old obstinate frontier complex, and in the new world it certainly cannot have the pre-eminent place of the past. Frontiers of the sky at any rate must not be restored to add to the acerbities of international life. With their disappearance, disappears also the idea of every country having its own civil aviation operating independently and competing wastefully.

"The form of international organization within and by which national services will both operate and cooperate will not be easy to define, and will plainly call for serious study and debate. One broad fact, however, simplifies its consideration. Such pattern of the future order as has so far emerged from the disruption of the war is based on four stout pillars—the British Commonwealth, the United States, Russia, and China. They mark firm geographical divisions.

"In any understanding for the international organization of civil flying after the war they seem destined to have a determining but not an exclusive voice. The collaboration between the air forces of the United Nations in time of war provides a starting point and a basis for the future common organization of their air services for the needs of peaceful commerce.

"Civil aviation may in fact prove a test case of that international cooperation which is essential if peace is to endure after victory . . . Civil aviation, even on the vast scale now promised, is not a competing but a complementary method of movement of men and goods. In peace it must be the partner of land and sea transport just as now air power is the partner of the two other services . . . Civil aviation must not be fettered by the claims or conventions established by sea and land locomotion but it must draw from them the experience and the support which they alone can give and employ their organization when and where appropriate."

ON THE RUN

Congressional Fight Looms on Plan For Standing Aviation Committee

By KATHERINE E. JOHNSEN

A FAR-REACHING revision in commercial and civil aviation legislation is on the docket of the new Congress, but a clash as to who shall lay the groundwork for the post-war commercial aviation era appears imminent in the House. Will it be the House Interstate and Foreign Commerce Committee with its subcommittee on aviation, or will a new standing committee on aviation be established?

To date, all commercial and civil aviation legislation has been handled by the Interstate and Foreign Commerce Committee, and all attempts to divest that committee of its authority over aviation

Fish Martin

matters have been nipped in the bud. When advocates of a separate standing committee to handle civil and commercial aviation legislation became somewhat troublesome in the last Congress, Chairman Clarence Lea (D., Cal.) of Interstate and Foreign Commerce weakened their case by creating a standing subcommittee on aviation.

Now, however, there is a more determined move than ever under way in the House to give aviation its own standing committee. Now, too, though, Chairman Lea has introduced a bill, to be called "The Civil Aeronautics Act of 1943," pending with his committee, which makes fundamental changes in aviation law and provides for commercial aviation development in anticipation of the post-war period.

Hearings on the Lea bill—also introduced in the Senate by Chairman Josiah Bailey (D., N. C.) of the Commerce Committee—will open in the near future, a time when the Republicans, strongly supported by some Democrats, will have their "push" for a standing committee on aviation underway.

The result, some observers predict, will be that the case of standing-committee-on-aviation advocates will be made impotent.

Heading the drive for the standing committee on commercial and civil aviation legislation in the House is Minority Leader Joseph Martin (R., Mass.) who made his position clear in a public statement on the first day of the new Congress and shortly afterward announced that "the large majority of Republicans" shared his views.

Martin pointed out that in all other instances, when fields have attained a certain point of importance, standing committees have been set up to handle their problems and development—for the ultimate benefit and development of the country.

"I now believe that the field of aviation has attained such a point of importance and that it should likewise be dignified by creating a standing committee in the House devoted exclusively to its needs," he said.

Plan Intelligently

The tremendous augmentation the war has given to aviation, the Republican Leader contended, is indicative of a post-war era of commercial and civil aviation. "It will loom large in our future national prosperity . . . It is necessary for the Congress to plan intelligently for this air supremacy following the war," Martin remarked.

"On a standing aviation committee, we would have aviation experts," he continued, "who could more adequately and competently handle specialized aviation legislation than the Committee on Interstate and Foreign Commerce"—which is also charged with the task of considering all other transportation and communications legislation.

Martin agreed that opposition by members of Interstate and Foreign Commerce is to be expected "because of the loss of their power involved." The position of Chairman Lea is that aviation as a factor in interstate commerce and communication logically should remain within the jurisdiction of his committee.

Actively abetting the Republicans are members of the Select Committee to Investigate Air Accidents: Jack Nichols (D., Okla.), chairman; Carl Hinshaw (R., Cal.), Richard Kleberg (D., Tex.), and Everett Dirksen (R., Ill.). Rep. Jennings Randolph (D., W. Va.) is also a booster for a standing committee on aviation.

21 Members

On the same day that Minority Leader Martin announced his determination to set up a standing committee, Rep. Hamilton Fish (R., N. Y.) introduced legislation proposing a committee of 21 members. The legislation, along with similar bills by Nichols and Hinshaw, is pending before the Rules Committee, of which Fish is ranking minority member. On the insistence of Fish, Chairman Adolph Sabath (D., Ill.) of the Rules Committee, has indicated that hearings will open when the request is made.

Even before committee assigning had been completed, Fish paved the way for expeditious and favorable action of his legislation with a speech on the floor of the House. He pointed out an immediate need of a committee devoted exclusively to aviation; he expressed apprehension that, unless a constructive program is ready to be put into effect the moment victory has been achieved, our dominance of airways in the Pacific, South and Central America and in Africa will be lost.

"World War No. 2 will bring about tremendous changes all over the world, and particularly in the greater use of airplanes for transportation and travel," Fish told House members.

He continued: "Aviation is still in its infancy. There are a million Americans employed in the aircraft industry, and another million in the Army and Navy Air Forces. It will emerge from this war as one of our greatest industries. Last year 48,000 war planes were produced, and in 1943 that figure will be doubled. The conversion of such a huge industry to peacetime requirements is a serious task in itself.

"The need for a permanent Aviation Committee should be apparent, if we are to have a definite policy of commercial airline expansion and perfect plans for world-wide air routes and transportation. The Congress should ascertain our rights to freedom of the air in Africa, where we are spending huge sums under Lend-Lease and war appropriations. Will we be permitted to use these airfields, after the war, for commercial aviation?

"It is not too soon to make plans to take care of the excess planes and excess pilots after the war, instead of virtually abandoning the aircraft industry as we did in 1919. There is no reason why thousands of planes and pilots could not be used, if plans are made in advance, to carry first class mail in the U. S. and abroad. Huge bombers could be easily converted into transport or cargo planes. The carrying of light freight by big planes is not only feasible but highly probable. It is not difficult to visualize transport planes seating 200 passengers, cargo planes that will carry 30 tons of freight, and fast commercial planes that will do over 300 mph. Aviation is only in the morning of its destiny.

"Unless Congress creates a permanent Committee on Civil and Commercial Aviation, the end of the war, with its shutting off of war orders, may cause an aviation tailspin and collapse that will far exceed the panic of 1932 and its resultant unemployment.

"It is the duty of Congress, as the sole Federal legislative body, to try by all possible means to avert a collapse in our aviation industry after the war. It should start now to plan the expansion of our air transport on such a large scale that it will keep our aircraft industries going and provide employment for one hundred thousand pilots.

"An aviation committee in Congress, composed of experts, could, through foresight and planning, help save our aviation industry and make it, as Eddie Rickenbacker says, the kingpin in American economy. The railroads were after the Civil War, the automobile after the World War; why not aviation after this war?"

Some Opposed

Opposition to a standing committee on civil and commercial aviation—at this particular time—is also evident in Congressional quarters, other than the Interstate and Foreign Commerce Committee, which is on record as opposed for all time.

Certain members of the Military Affairs Committee point out that civil and commercial aviation is now so closely entwined with Army aviation, that a separate standing committee would give rise to confusing and overlapping legislation, and would be disposed to encroach on strictly military aviation matters.

NEXT ATTRACTION

Neb in The London Daily Mail.

"Don't ask me—all I know is that it wasn't there yesterday."

Cartoon by Low.

"Quoth the eagle, 'Nevermore.'"

New Budget Mum on Aircraft Plans; CAA, CAB, Air Mail Figures Down

Pilot Training Funds to Be Sought Later

THE President's Budget submitted to Congress at the opening of the session indicates increases in military and naval expenditures in fiscal 1944, as compared to 1943—although no breakdown is made for aviation. The new Budget, however, recommends a decrease in CAA, CAB, and air mail expenditures in 1944, as compared to 1943.

Estimates were not included in the Budget for two very important CAA items—civilian pilot training and development of landing areas. These supplemental estimates will not be submitted until March. An estimate for CAA's new mechanics training program was also omitted, but it also may be forthcoming in the spring.

The President introduced his Budget message to Congress by pointing out that monthly expenditures for war purposes which amounted to two billion dollars just after Pearl Harbor now exceed six billion dollars and will average more than eight billion dollars a month during the 1944 fiscal year.

"For the whole of the current fiscal year total war expenditures are now estimated at 77 billion dollars; for the next fiscal year, at 100 billion dollars," the President stated, adding: "These estimates include the net outlays of government corporations for war purposes and assume only a small rise in prices."

The Budget estimates War Dept. expenditures for 1944 amounting to $61,996,370,000, as compared with $43,961,750,400 estimated expenditures in 1943 and $14,069,958,014 actual in 1942.

War Dept. recommended appropriations, however, are somewhat under estimated expenditures for 1944, in that the latter takes into consideration carry-over funds which will be ready for obligation in the next fiscal year. War Dept. appropriation recommended for 1944 is $53,009,907,777, as compared with $42,821,066,550 actual appropriation for 1943, and $75,512,685,947 actual for 1942.

Following are comparable figures for the Navy Dept.

	Estimated 1944	Estimated 1943	Actual 1942
Expenditures	$22.000.000.000	$17.500.000.000	$ 8.579.588.975
	Recommended 1944	Actual 1943	Actual 1942
Appropriations	$23.000.000.000	$19.801.631.662	$18.686.603.128

The building of access roads to defense plants and for military strategic purposes will be considerably augmented in the next fiscal year, Budget figures reveal. An expenditure of $115,000,000 is estimated for this purpose in 1944, as compared with the $91,000,000 estimated for 1943, and the $10,075,525 for 1942.

No figure is given in the Budget for flight strip construction, which probably means that the present program has been completely financed and that there are no plans for a further program. In 1943 recommended expenditure for flight strips was $9,900,000; actual expenditure in 1942 was $11,402.

Of the five CAA items conclusively reported in the Budget, "establishment of air navigation facilities" shows the sharpest decline for 1944, as compared with 1943. Recommended expenditure for navigation facilities for 1944 is $4,000,000, as compared with $17,000,000 recommended for 1943, and $7,915,070 actual for 1942. Recommended appropriation for this item for 1944 is $2,513,000, for 1943 was $10,533,375, and actual for 1942 was $21,768,290.

Following are data on other CAA items reported in the new Budget:

	1944	1943	1942
1. General Administration			
Expenditures	$ 1.800.000 (estimated)	$ 1.600.000 (estimated)	$ 952.263 (actual)
Appropriation	1.823.000 (recommended)	1.635.000 (actual)	990.000 (actual)
2. Maintenance of Air Navigation Facilities			
Expenditures	20.000.000	21.000.000	15.115.891
Appropriations	19.848.000	22.035.900	16.323.720
3. Technical Development			
Expenditures	650.000	950.000	384.450
Appropriations	542.000	950.000	743.702
4. Enforcement of Safety Regulations			
Expenditures	2.000.000	2.800.000	3.101.591
Appropriations	2.479.000	2.590.000	2.906.000

The President's Budget reveals a decrease in CAB expenditures to $1,115,000 in 1944 from $1,193,000 in 1943. The 1942 expenditure was $1,111,347. CAB appropriation recommended for 1944 is $1,204,000, as compared with the $1,243,500 actual for 1943 and the $1,179,000 actual for 1942.

Budget carries $23,415,400 for domestic air mail, $1,172,715 less than fiscal 1943, while foreign air mail totals $8,000,000, or $8,055,979 under fiscal 1943.

Because of uncertain conditions, Post Office Dept.'s domestic air mail officials had determined to ask the same amount as in 1943, namely $24,588,115. However, at the time the Bureau of the Budget was considering this appropriation, CAB released the Eastern Air Lines rate decision and this cut was subtracted from the 1943 figures, leaving $23,415,400. Post Office savings under the American rate decision had already been subtracted.

The big cut in foreign air mail, it is learned, results from (1) reduction of Pan American's Latin American rates, and (2) the fact that fewer services will be operated next year (for instance, PAA's trans-Pacific routes).

The $23,415,400 domestic air mail figure includes even those routes on which service is now suspended. Post Office Dept. officials reasoned that money should be on hand in case it was possible to re-open any of the routes. It is expected, however, that even with the suspensions the entire $23,415,400 will be spent, because excess poundage on some routes is making up for the suspended routes.

2600 Planes to USSR

Lend-Lease Administrator Edward R. Stettinius Jr. said on Jan. 20 that the U. S. has sent approximately 2,600 airplanes to Russia. This, he said, is more than has been sent by Lend-Lease to the United Kingdom or any other military theater.

Moore Calls Off Protests on Lee

Newly elected Sen. E. H. Moore (R., Okla.) created a flurry on Capitol Hill when he arrived in Washington announcing his first intention was to fight the nomination of his defeated opponent, Josh Lee, to a $10,000 a year job on the CAB. Brand new Senators are usually seen and not heard and the courtesy code on approving appointments of ex-Senators is strict.

But Moore was at first determined to insist on hearings on the Lee nomination, and to disregard all Senatorial customs. On further consideration, however, he edged off with only a letter of protest to the Senate Commerce Committee. Members of the Commerce Committee were silent on the Lee nomination, or when questioned, made very favorable comment. Minority Leader Charles McNary (R., Ore.) who is ranking minority member of the Commerce Committee, remarked: "I think Sen. Lee is very deserving and very well qualified for an appointment to the CAB."

Moore did, however, furnish Senators with mimeographed copies of an editorial in the current issue of *U. S. Air Services*, entitled "If We Had Supposed They Were Men of Joshing—We Beg the Senate Not to Confirm the Appointment."

Moore's count against Lee is disqualification for the position.

"He's not even a promoter of aviation himself—he's afraid to fly," Moore, an air traveler for over years, pointed out.

Senate Commerce Committee Gains 2 Air Boosters

Sen. Pat McCarran (D., Nev.) and Sen. Alexander Wiley (R., Wis.) two of the Senate's most boosters of greater air power, have been assigned to Senate Committee.

The Committee, headed by Josiah Bailey (D., N. C.), has all commercial and civil aviation matters. Although the new Congress has only been in session a short time, there is a heavy schedule of aviation matters already pending.

Bills include:

(1) The Lea-Bailey Bill (S. 3[illegible]) entitled "The Civil Aeronautics Act of 1943," making far-reaching changes in commercial aviation law.

(2) A resolution (S. Res. [illegible]) sponsored by McCarran, providing

McCarran Bailey

for an investigation of the problems involved in readjusting aircraft production to a civilian basis after the war in order to assure U.S. commercial air supremacy.

(3) S.13 providing for the training of air-traffic control-tower operators.

(4) S.15 authorizing the advanced training in aeronautics technical personnel of the CAA.

(5) S.16 promoting safety in development of air commerce regulating the lighting of airports and other landing areas.

(6) The nomination of former Senator Josh Lee to a position on the CAB.

(7) A resolution (S. Res. [illegible]) authorizing a continuation of the Senate Special Committee on Safety, headed by Sen. Bennett Clark (D., Mo.).

Three Democrats on the committee last year have made their exit: Josh Lee (defeated); Prentiss Brown (defeated); and Lister Hill (D., Ala.) who resigned, creating the vacancy for McCarran. In addition to Wiley, newly elected Sen. E. V. Robertson (R., Wyo.) will take a position on the Republican side of the Committee.

Army Maps Plans to Speed CAA Pilot Training; Cuts School List

CHANGES in the national pilot training program of Civil Aeronautics Administration's War Training Service were announced by the Army Air Forces Jan. 20, including the decision to permit the schools to give elimination courses to select cadets who will later enter combat training.

WTS had not been permitted to give training to potential combat pilots since last summer.

The announcement failed to make clear other policies which the AAF will follow, which are of intense interest to about 500 flight school operators now participating in the CAA program.

50% Cut

It was generally believed in Washington, however, that the number of schools will be sliced by about 50%. Although the government prefers not to purchase any more schools than necessary, it is understood that operators will be given the option to sell out to Defense Plant Corp. of the Reconstruction Finance Corp., whether they are or are not selected by the Army to continue operation.

Text of the announcement follows:

"The Army Air Forces announced today an important expansion of their use of CAA training facilities in connection with their program for the production of combat and service pilots. The new plans, which have been under discussion for several weeks, have the complete approval of the Department of Commerce.

"Under the expanded program the name Civilian Pilot Training Program has been changed to 'CAA War Training Service.' The revised training schedule will be separated into two divisions.

"In the first division training will be given by continuation of the series of courses now in operation, to men who will eventually qualify as transport pilots and instructors. Sufficient candidates are either now already in training, or are enrolled and awaiting call, to meet the requirements of this division for approximately the next year. Generally speaking, these men are not eligible, for physical or other reasons, to serve as combat pilots. They will receive, without charge, tuition, subsistence and quarters.

New Courses

"In the second division new special qualification courses will be conducted for a certain proportion of prospective aviation cadets prior to their entry into the regular Army Air Forces schools. The number will depend on the amount of equipment available. At the present time a large number of these men are in the enlisted reserve, awaiting call to active duty. It is expected that these men will be called in the near future and assigned to approximately 100 colleges selected throughout the country in localities where flying fields are conveniently available. The colleges selected will be announced as soon as the list is completed. At these colleges the men will receive a course of study and training under the direction of AAF officers. This course will be supplemented in its latter part by flying instruction by the CAA War Training Service to the extent that facilities permit. Men who are found unqualified for additional flying training will be eliminated as pilots and will be used in other capacities. In this way the percentage of cadets eliminated in the regular AAF schools should be reduced and the work at these schools benefited.

"The college courses in the second division are scheduled to commence in April. A large number of the schools and colleges now giving CAA training will participate in the program. The entire arrangement will provide for a maximum utilization of existing CAA facilities and will assist in meeting the demands for pilots both by direct training and by increasing the output of the regular AAF schools."

Meanwhile, Sen. Pat McCarran informed *American Aviation* that CAA and the Army have agreed to utilize CAA training facilities to the extent of processing about 70,000 men a year. He estimated that 120,000 young men "are champing at the bit to get flight training," having been accepted months ago by the Air Forces but kept idle because plans had not been made in advance to take care of them. Meanwhile, flight contractors have been facing "bankruptcy and wholesale disaster" because of excessive borrowing of funds, red tape in obtaining badly needed priorities for maintenance and repair parts for aircraft. He forecast immediate relief on priorities.

Praises CAA

"CAA has done a magnificent training job, but the Army has thrown a block in their way all along," McCarran complained, after hearing Senate Appropriations Committee testimony.

The Army will select colleges where youths can receive adequate training in sciences, mathematics and other basic subjects, then CAA will aid in selecting flying schools in the area best equipped to handle the load.

Spaatz Appointed

Maj. Gen. Carl Spaatz has been appointed Commander in Chief of a new Allied air force in North Africa, which consists of the Eastern Air Command of the RAF, the American 12th Air Force, Maj. Gen. James H. Doolittle commanding, and possibly some French units.

Air Transport's Vital Role In British Offensive Told

The dramatic and vital role played by air transport in the British Eighth Army's offensive against Rommel has finally been told.

Using American Lockheed Hudsons, the Royal Air Force practically insured the success of the "big push" by flying huge quantities of ammunition (shown in the picture above), gasoline, rations and water to advanced units of the Eighth Army, which had temporarily outdistanced ground communications.

But the most spectacular operation, according to the British Press Service, was the "lifting" of an entire fighter force—stores, tents, ground personnel, motorcycles, etc. This force was set down on a landing ground "well inside enemy territory. From this desert hideout the fighters were able to attack enemy transport columns as far away as Benghazi and on the road to El Agheila at a time when the retreating Axis forces believed they were beyond the range of single-engined aircraft."

When Rommel's defense broke at Alamein several weeks ago and the Axis troops began to retreat, thousands of gallons of water were flown to a landing ground south of Sidi Barrani while that place was still held by the enemy. Ammunition, gasoline, rations and water were also taken to a landing ground between Sollum and Benghazi while Sollum was still occupied by the enemy.

The transport squadron which kept these fighters supplied behind the enemy lines was formed last year, the British say. It is commanded by Wing Commander Robert Gordon Yaxley.

Airborne Engineers Built Advance Fields Through North Africa

Speedy construction of advance airdromes to support the action of U. S. forces in Tunisia was accomplished by airborne Aviation Engineer units, War Dept. has revealed.

After calls came through to these engineer groups, transport planes carried them about 1,000 miles to the selected sites. Within three days according to announcement, the trip had been made and runways prepared and the first B-17 Flying Fortress had begun operations. A second field was ready on the following day.

In this way the airborne engineers help to solve one of the toughest problems so far reported in the North African campaign, that of providing quickly advance airdromes in country without transportation facilities. These groups were reported to have been landed in North Africa at the very beginning of the drive, in readiness for whatever call from the advance positions.

Naval Air Transport Service Flying 40,000 Route Miles—Schildhauer

One year after authorization for its organization, the Naval Air Transport Service is operating 95 multi-engine transport planes over 40,000 route miles to Australia, Alaska and the Aleutians, Newfoundland, Brazil, throughout the Caribbean area, and all over the continental United States.

Service is expected to be extended across the South Atlantic to Africa in the near future.

The NATS' load factor is now approximately 75%, running as high as 98% on some routes, while for August, 1942, latest figures released, pound-miles of passengers and cargo attained 1,824,000,000, with passenger miles for that month totaling 4,500,000. Pan American Airways and American Export Airlines are operating supplementary contract services for NATS. Between Aug. 1 and Nov. 1 1942, ton-miles flown per week increased from about 155,000 to 270,000.

Schildhauer

These figures and much other information on NATS, hitherto considered restricted information, have been released by Comdr. C. H. Schildhauer, officer-in-charge, formerly with Pan American Airways and Glenn L. Martin Co.

Organization problems, general description of the system and its routes and equipment, types of priorities, and examples of cargo carried are outlined for the first time for general publication.

On Dec. 12, 1941, the Secretary of the Navy authorized establishment of the Service as a section of the Naval Transportation Service, a division of the office of the Chief of Naval Operations. This organizational set-up immediately placed the responsibility for operating the transport service with the Operations Branch of the Navy, leaving the Bureau of Aeronautics charged with providing the transport service with aircraft, maintenance equipment, and necessary operating information.

The Service was inaugurated first to utilize existing aircraft and those being built to the fullest extent possible on scheduled transport operations. Second, to develop and maintain an organization capable of engaging in and supporting tactical operations.

"The immediate problem at hand was to combine the 'know how' of the airlines with that of the Navy," the commander said. "Air transport in the Navy is not in itself new. The very designation of transport aircraft as VR aircraft has been in use for years, and aircraft of this class have been assigned to several Naval Air Stations and to Fleet activities. However, the dependability and efficiency of a scheduled service required an organization capable of applying the airline technique to military transportation."

Early in 1942 the Naval Air Transport Service Section along with all other aviation activities of the office of Chief of Naval Operations, was transferred to the newly formed Aviation Division under the Directorship of Captain Frank D. Wagner, USN, who was subsequently to be relieved by Captain J. P. Whitney, USN.

Operations began in Feb. 1942 when Commander C. K. Wildman, USNR, commissioned Squadron VR-1 with its base at Naval Air Station, Norfolk, Va. The first scheduled service was a three times weekly landplane operation from Boston to Corpus Christi.

In rapid succession two other units were formed; Squadron VR-2 with headquarters at Naval Air Station, Alameda, Cal., to operate in West Coast Alaska and Pacific Areas; and Squadron VR-3, based at Naval Reserve Aviation Base, Kansas City, Kan., to operate between Naval establishments within the continental limits. Today, these three squadrons, still rapidly expanding, form Service, together with the contract commercial carriers, Pan American Airways and American Export Airlines, whose operations are closely integrated with those of the squadrons.

Names Planes

NATS is now flying schedules over 40,000 route miles using 95 transports. These comprise the Douglas DC3 in the form of the R4D-1 and the R4D-3, corresponding to the Army C-47 and C-53; the four-engined Consodidated PB2Y-3, converted for use as a transport; the four-engined Sikorsky S-44, known in the Navy as the JR2S-1; the twin-engined gull-wing Martin PBM-3, converted to a transport; the Boeing 314 clipper, and several miscellaneous types acquired from the airlines. Future deliveries will include the Curtiss-Wright Commando and the Douglas DC-4 as well as the giant Martin Mars.

"Routes now being operated include the Pacific boat operation, which extends from VR-2's base at Alameda, Cal., to Pearl Harbor, Hawaii, and thence southwest through the Pacific islands to Australia. Traffic on this route must remain a matter of military secrecy. However, it can be said that at least daily service exists to all points along this route. Of scarcely less importance as a supporting operation, is the VR-2 landplane operation into the Alaskan and Aleutian theater where Douglas R4D aircraft, specially equipped and winterized for the difficult cold weather problems encountered in that area, are flown and operated by specially trained crews between Naval Air Stations at Seattle and Kodiak. VR-2 also operates landplane schedules between Naval Air Stations at Seattle, Alameda, San Diego, and Corpus Christi, Texas, where a junction point is established to tie their operations to those of VR-1.

Describes Routes

"The VR-1 landplane route extends northeast through Naval Air Stations and Reserve Aviation Bases at New Orleans, Pensacola, Jacksonville, Charleston, Norfolk, Washington, Philadelphia, New York, Boston and Argentia, Newfoundland. A summer operation takes the service to Greenland and Iceland.

"Another VR-1 route extends from Norfolk south to Naval establishments at Guantanamo, Cuba, San Juan, Puerto Rico, Antigua, St. Lucia, Trinidad, and along the east coast of South America to Natal and Rio de Janeiro.

"VR-1 flying boat operations include scheduled service between Norfolk, Miami, Great Exuma, Bahamas, Guantanamo, Cuba, Portland Bight, Jamaica and Coco Solo, Canal Zone. There is also a flying boat operation between Miami and San Juan. Present plans call for the extension of VR-1 boat operations to include service from the United States to Africa across the South Atlantic.

"VR-3, the continental squadron, is concerned solely with landplane operation serving Naval establishments within the continental limits. At present this squadron operates a fast transcontinental express service connecting Naval Training establishments and key Navy manufacturing centers. This service operates on a five times weekly basis.

Praises Airlines

"The Navy owes much to the airlines in having put into practice in the short space of one year a great deal that the airlines had learned through years of experience.

"Internal operation and organization of squadrons is modelled on Naval usage coupled with best commercial practice. Squadrons themselves correspond more to the divisions of an airline than to a combat squadron. There is diversification of equipment, although it is all of the transport class. Also the number of planes, and therefore the size, of the transport squadron is variable. Division of squadrons and their location is therefore more a matter of geography than of military administration. The NATS Manual, the basic guide book of the organization, is itself practically a reprint of the best that we could find in the operation manuals of U. S. airlines, all of whom cheerfully made available all the information that the Navy required upon request.

"It is with reference to personnel, however, rather than to any other particular that Naval Air Transport is indebted to the airlines.

"In order to maintain efficient service with short stops between Naval establishments, it was necessary that we provide officers experienced in air transport work, and men to assist them at each station through which it operates. Accordingly, a reserve officer with previous airline experience, designated Air Transport Officer, was assigned to each such station. This officer reports directly to the Commanding Officer of that station.

"Other experienced airline officers are assigned billets in the Operations and Engineering Departments of the squadrons, which departments follow closely the lines of airline practice. Certain additions are inevitable, such as the necessity for the use of code in operations, and an Ordnance Section in the Engineering Department. The Flight Officers are simply Navy designation for the chief pilots of the airlines. Maintenance is conducted in the squadrons on the preventive system with strict attention to the time of all parts and accessories; progressive overhaul and the quick turn-around are religiously practiced to achieve a high utilization of equipment.

"The contribution of air cargo to World War II will perhaps never be fully appreciated until the need for military secrecy is over. Its importance should be measured by the time saved rather than by the amount transported.

"Without revealing locations or dates some of the jobs Navy air cargo planes are doing may be cited:

"A battle-damaged submarine went one Thursday afternoon for repair parts —Thursday night, Friday, and Friday night were required to complete the manufacturing of the material. A police escort rushed the shipment to an airport early Saturday morning while the submarine and its crew (10,000 miles away) waited. Four days later the parts were being installed and the vessel was soon engaging the enemy again. Without air transport this submarine might have been out of action a month or more.

"In a combat area recently the gasoline requirements of carrier-based fighter

(Turn to page 28)

Official Air Forces Photo.

Take-off: An Air Forces C-53 takes off towing a Waco CG-4 glider. In take-off, the glider leaves the ground first.

Lindbergh Does Research

Charles A. Lindbergh is engaged in special research and development projects at one of the plants of United Aircraft Corp., East Hartford, Conn. United's announcement said that Lindbergh, for some time employed at Ford's Willow Run plant, had been doing high altitude flying research with Pratt and Whitney engines. He will divide his time between Ford and United Aircraft.

XUM

"HUNTING JAPS on thousand-mile sweeps of the Pacific sure gives me something to look forward to. When we've finished this job, I'm going to buy a plane and hunt everything from Kodiak bear to Carolina quail. Because I've learned you can *find* where you're going and get back home again—if you're flying with instruments you can depend on—*real precision* instruments like they're putting in these babies."

"I LIKE SPEED, but when I fly I want to *know where* I'm going. That's why I want the best precision instruments I can get—instruments I can trust, no matter how tough the going. Then I can use my plane in all kinds of weather, to go *where* I want, *when* I want. After all, *utility* is what you want in an airplane."

MADE TO TOLERANCES as close as .00001", the moving parts of some Kollsman instruments are so precise and must operate at such temperature extremes that the finest oil is too heavy for them. Hence, the gear pinions are set on jewel bearings to insure almost frictionless operation, with plane vibration replacing lubrication.

The Square D Company manufactures Safety Switches, Electrical Motor Controls, Circuit Breakers, Switchboards, Pressure Switches, Panelboards, Multi-breakers, Welding Controls and Kollsman Aircraft Instruments.

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"To the Army Air Forces and the Airlines of the United States"

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"For Pioneering World-Wide Air Transportation Vital to Immediate Defense and Ultimate Victory"

★ ★ ★

THE coveted Collier Trophy has been presented jointly to the Army Air Forces and the airlines for establishing world-wide air transport service to bring U. S. production centers within a few hours of the combat theaters.

This job which the airlines are doing in partnership with the Army Air Forces comes after sixteen peaceful years during which the airlines prepared to serve their country in case of war. Long before enemy powers realized the true importance of air transportation in military operations, the Government and the airlines were developing in this country the world's greatest air transport system. At the outbreak of war, this system was placed at the War Department's disposal, in accordance with well-laid plans.

Today airlines are performing a two-fold job:

1. Under the direction of the Army's Air Transport Command, airlines operate military routes within this country and to many foreign lands.
2. Over their regular domestic routes, the airlines continue to operate regular schedules.

The airlines are indeed proud to share the honor of the Collier Trophy with the Army Air Forces. It signifies the importance to the war of the air transport facilities developed by the Army and the airlines.

UNITED AIR LINES

★ BUY WAR BONDS FOR VICTORY ★

Indictments Due In Wright Field Fraud Studies

After first denying that investigations underway at Wright Field were anything more than routine checks the War Dept. through Under-Secretary Patterson Jan. 11 verified reports first published by *American Aviation Daily* that Lieut. Col. William O'Dwyer has led Army officers in studies which parallel those of the Justice Dept's Anti-Trust Division under Tom C. Clark.

"In accordance with policies laid down by the War Department the Army Air Forces has for some time been conducting a continuing investigation into the negotiation and performance of contracts which it has placed for production of equipment." Patterson said. "The aim is to unearth and investigate any matters indicating irregularities or frauds in connection with such contracts.

"The recent assignment of Lieut. Col. William O'Dwyer of the Army Air Forces to this field has been made in order to augment this continuing effort. Prior to entering the Army in June of last year, Lieut. Col. O'Dwyer was District Attorney of Kings County, Brooklyn, New York. In cases in which any question of irregularity arises, the matter is referred to the War Frauds Unit of the Department of Justice. Further investigation in such cases is conducted by the Department of Justice and by the Army Air Forces, working jointly. It is believed that indictments will be sought in the near future by the Department of Justice as a result of information sumbitted to it by the Army Air Forces regarding certain contracts entered into at Wright Field, Dayton, Ohio.

"To date, none of the investigations has involved charges against any Army officer."

Until this statement was released the Department refused to confirm the investigation or that O'Dwyer was working at the direction of Patterson. They stated merely that he was an "inspector" for Materiel Command.

Civil Briefs

Courier Service: President of the Chamber of Commerce, Cleveland, O., recently asked 1,200 war plants to contribute $150 each to participate in service from a CAP courier station which will speed rush shipments and travel of key personnel, according to Office of Civilian Defense.

Arms Study: Office of Civilian Defense has announced it recently issued a directive authorizing CAP revolver and pistol study, both in classrooms and on the range.

Message Dropper: Because relatively few aircraft have two-way radio communication, Indiana wing of CAP has ordered all planes to carry two half-pint ice cream containers (cylindrical type, with lid) for dropping messages. A five foot strip of yellow cloth is attached to each container to increase visibility. It is believed this method will be of "vital importance" in emergencies.

WPB Stops Construction on 41 Airport Projects

Since the first of the year the War Production Board has revoked priorities and ordered the stoppage of construction on 41 airport projects located in 28 states and costing a total of $23,585,056.

This does not include the cost of two projects, for which figures were not available. The airports were part of the program of the Civil Aeronautics Authority of the Department of Commerce. On October 1, 1942, CAA announced expenditure of $199,740,000 on airfields, mainly class 3 and 4, at the direction of the Army and Navy Departments. Work was to improve existing facilities and to create new airports that Army, Navy and Commerce declared military necessities.

Material shortages have caused WPB to issue the stop orders although on several of the projects: "construction may be continued solely for purposes of safety or health, or to avoid undue damage to or deterioration of materials already incorporated, and work necessary to complete the drainage." WPB is also allowing some projects to complete grading, to complete taxiways, to repair sinkholes, etc. Nearly all electrical installations have been banned.

Airport development projects which were ordered stopped were: Nogales, Ariz., $650,000; Willcox, Ariz., $700,000; Miami, Virginia Key (Miami Number Two), Fla., $1,053,150; Mason City, Ia., $650,000; Donaldsonville, La., $935,410; Ruston La., $1,036,296; Natchez, Miss., $593,325; Helena, Mont., $659,800; Artesia, N. M., $750,000; Saranac Lake, N. Y., $584,000; Cushing, Okla., $700,000; Wilkes-Barre, Pa., $2,880,000; Georgetown, Tex., $394,000; Willimantic, Conn., $185,000; Tarpon Springs, Fla., $650,000; Twin Falls, Idaho, $761,000; Peoria, Ill., $250,000; Princeton, Me., $812,000; Hattiesburg, Miss., $550,000; Whitefield, N. H. $403,000; Bendix, N. J., $550,000; Hightstown, N. J., $615,000; East Hampton, N. Y., $372,000; Alva, Okla., $100,000; Longview, Tex., $100,000; Uvalde, Tex., not given; and Parksley, Va., $430,000

Airport lighting facilities ordered stopped immediately were: New Smyrna, Fla., $55,000; New Orleans-Kenner, La., $108,000; Blanchard, Okla., $34,000; Purcell, Okla, $32,000; Shawnee, Okla., $26,000; Arlington, Grand Prairie, Tex., $45,000.

Certain work was allowed to continue on eight of the airport development projects ordered stopped. These were: Montpelier, Idaho, $405,950; Devil's Lake, N. Dakota, $606,373; Santa Fe, N. M., $1,253,513; Easton, Md., $1,161,320; Athlon-Orange, Mass., $1,185,390; Hyannis, Mass., $748,529; Allentown-Bethlehem, Pa., not given; and Bradford-Kane, Pa., $560,000.

Complete First Tests: Two of the first "in flight" pictures of the new Lockheed Constellation are shown above.

More Experts Leaving WPB Aircraft Staff

Changes in aircraft personnel at WPB are continuing daily with the resignation of more staff members and re-appointment of Merrill Meigs as a business consultant to Charles E. Wilson, WPB vice-chairman, on a per diem pay basis. Meigs resigned his position as Director of the WPB Aircraft Production Division on Nov. 16, 1942 and became a business consultant to the branch effective for 60 days. On Jan. 16 his appointment was renewed.

Remaining on Wilson's personal staff are four members of the old Division, which will become defunct officially when Wilson formally approves T. P. Wright's ARCO (Aircraft Resources Control Office) chart, whose preliminary form appeared in *American Aviation* Jan 15.

Grover Loening is a special assistant to Wilson, while Arthur Gardiner, Ward Jackson and Bruce Leighton are listed as assistants to the director of Production operations. The latter position had not been filled when this story was written.

Lombard Stays

Dr. A. E. Lombard, Jr., has reconsidered his resignation and will work with ARCO. The original chart showed him as head of the CMP Policy Committee of WPB and Materials Control Officer of ARCO's Materials Branch. William C. Lawrence, loaned to WPB by American Airlines, is returning to his company as director of research and development. The names of Fred W. Ayers and A. Ogden Pierrot are among those on the probable list of resignations.

The feeling among the majority of the WPB aircraft personnel is that their usefulness, as far as any direct say-so in production, actually ended last March 12 when Donald Nelson gave the Army and Navy production and procurement powers while saddling the WPB Division with responsibility for production. A number of officials have stated that they feel they can do more useful work in the war effort back in private industry than following orders of Army or Navy officers, many of whom have not the background of the WPB staff which was started by Knudsen and carried on by Harold Talbott and Wright, all aviation experts.

When ARCO moves to the Pentagon building the personnel will be divided on the Army and Navy payrolls. Wright will be on the Navy payroll as civilian director of the Office. He sought this arrangement and numerous Washington rumors had it that he wanted a Naval commission. However, it now appears that he should remain in civilian status to balance the Office membership of the Army's Brig. Gen. Bennett Meyers and the Navy's Rear Admiral E. M. Pace, Jr.

XUM

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THE air-fronts of the world are Fleetwings' "Sector." And wherever you find American planes—in England or China, in Russia or Australia, in Africa or the Solomons—you'll find Fleetwings' parts in there fighting.

Not a few of those Jap planes downed at Buna, Gona, and elsewhere in the Pacific theater, were downed by men in planes that were built in part by Fleetwings. The Fleetwings' task force of Victory-minded employees and pioneering engineers can also tell you something about the tail surfaces on those American bombers that are making Hitler's life miserable.

The list could go on and on for Fleetwings makes almost every conceivable type of airplane part—wings, fins, stabilizers, fuselage sections, tail assemblies, rudders, ailerons, hydraulic equipment. And Fleetwings works with practically every aircraft material—stainless steel, aluminum, bonded plywoods.

Today, Fleetwings' production is concentrated on permanently sky-writing "American Air Power" into German history books. But for tomorrow, Fleetwings is already shaping plans. With Victory, these plans will unfold and help to sky-write the Peace.

★

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The BT-12, all-welded basic trainer built for the U. S. Army Air Forces.

FLEETWINGS' new basic trainer, BT-12, being produced in quantity for the U.S. Army Air Forces, is the world's first all-welded military plane to be constructed principally of stainless steel.

SCARCELY A WEEK goes by but what some member of Fleetwings' "flying squad" of special assignments men discovers a better, faster or easier way to do some particular job. Accompanying most of these discoveries has been the invention of a new tool. One of the newest of these tools is a retractable plunger for use on conventional-type rivet squeezers which makes inaccessible riveting spots become accessible.

ANOTHER NEW Fleetwings-designed tool is a long-reach, alligator-type jaw for a rivet squeezer which reduces the weight for this kind of tool nearly 50%. With this lighter jaw on a squeezer it is now possible for women to do jobs which previously could be handled only by men.

IN THE INTERESTS of Victory, both of these production short-cuts have been shared with the industry.

LAST MONTH'S OFFER to put your name on the mailing list to receive "The Fleetwings' Arrow" still goes. If you'd like to get this informative little magazine each month, merely write us on your company stationery and say so. Send your request to "The Arrow," Fleetwings, Inc., Bristol, Pa.

"KEEP 'EM FLYING!"

FLEETWINGS

Incorporated

BRISTOL • PENNSYLVANIA

Army-Navy Decorations

Silver Star

(Southwest Pacific)

This award was made posthumously to the following: Maj. Harold N. Willsie; Lt. Philip D. Reece; Sgt. Carl T. Robarts; Sgt. John Kominicki; Cpl. F. J. Antone; Pvt. Harold W. Davis; Pfc. Harry R. Parry, and Pfc. Homer D. Bilyeu, all of the U.S. AAF.

(United States)

Maj. Gen. Oliver P. Echols, Commanding General of the Army Air Forces Materiel Command, "for exceptionally meritorious services to the Government in a duty of great responsibility as Chief of Materiel Division, Office of Chief of Air Corps . . ."

Purple Heart

(Southwest Pacific)

Captain Thomas H. Winburn, San Antonio, Texas; Lt. Dave H. Hoyer, Beaver Dam, Wis.; Lt. Frederick C. Roberts, Easton, Pa.; Lt. Robert L. Stimson, La Jolla, Cal., and Lt. William R. Walker, Jr., Jacksonville, Texas, all of the U.S. AAF.

DFC

(United States)

Lt. Harry J. Kane, Minneapolis, Minn.; Lt. Lynn A. Murray, Osnabrock, N. D.; Cpl. George E. Bellamy, Overton, Texas; Cpl. Presley C. Broussard, Delcambre, La.; Cpl. Leo P. Flowers, San Bernardino, Cal., all of U.S. AAF.

(Middle East)

Lt. Gen. Frank M. Andrews, Commander of the United States Forces in the Middle East, "for extraordinary achievement in aerial flights in furtherance of the development and expansion program of the Army Air Forces."

Air Medal

(United States)

Lt. Earl C. Kent, Minneapolis, Minn.; Lt. Richard H. Schoenberger, Miamisburg, Ohio; Lt. Carlus Turner, Pahokee, Fla.; Lt. Bill F. Williams, Fort Worth, Texas; Sgt. Ira C. Robertson, Pontiac, Mich.; Pvt. Wilbert H. Elliott, McCordsville, Ind.; Pvt. Louis Kirkpatrick, Mountain Home, Ark.; Pvt. Vincent O. McMahon, Providence, R. I.; and Pvt. James N. Thomas, Mebane, N. C., all of U.S. AAF.

Oak Leaf Cluster

(Southwest Pacific)

Posthumous award to Captain Clyde H. Webb, Jr., U. S. AAF.

Captain Joseph J. Kruzel, (also awarded Purple Heart), Wilkes-Barre, Pa.; Captain Nathaniel H. Blanton, (also awarded the Purple Heart), Earlsboro, Okla.; Captain Cuthbert L. Moseley, Jr., Raleigh, N. C.; Lt. Clarence T. Johnson, Jr., Atlantic Beach, Fla.; Lt. John T. Landers, (also awarded the Purple Heart), Joshua, Texas, all of U. S. AAF.

(Hawaii)

Captain Harold N. Chaffin, Fort Smith, Arkansas, U.S. AAF.

Gold Star

(Mid-Pacific)

Lt., j.g., Walter A. Haas, U.S.N.R., Haddonfield, N. J., and Ensign John B. Bain, U.S.N.R., Belzoni, Miss.

Rep. Vinson Acts To Halt Plan of Single Air Force

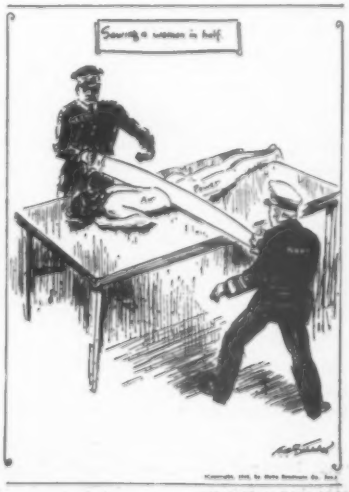
Legislation introduced by Chairman Carl Vinson (D., Ga.) of the House Naval Affairs Committee providing for "closer coordination" between his committee and the Military Affairs Committee, admittedly is to "block any move for unification of the air services or separation of the air services from the Army and Navy," he told *American Aviation* after introducing a bill for the purpose.

The legislation stipulates that three members of the Naval Affairs Committee are to be ex-officio members of the Military Affairs Committee, and vice versa.

The chief aim of the legislation is to further coordination of the affairs of the Army and Navy. As such, it will seek to invalidate criticisms of lack of coordination—particularly in the air programs, where there is the greatest danger of duplication and overlapping. Such criticisms are often used in support of unification of command with three co-equal subdivisions—Army, Navy, Air. Unification of command, as it is generally proposed, would boost aviation to a position of equality with the Army and Navy, instead of retaining it as a component subdivision of the services. Both Army and Navy are strongly opposed to the measure, as well as the White House.

Ranking minority member of the House Naval Affairs Committee, Rep. Melvin Maas (R., Minn.) is an advocate of unified command.

As reported in the "Trend of the News" column of *American Aviation* Jan. 15, most Washington observers expect a lively contest on Capitol Hill on the separate air force subject, but there seems little chance of complete success. Further important concessions probably will be made, however, so that advocates of all-out air power may make some gains merely by pushing the fight to the limit. The public's high opinion of the possibilities of aviation in helping win the war is a powerful factor on Capitol Hill.



New York Daily News

XUM

War Agencies Review

SIX NEW CLAIMANT AGENCIES to present claims for critical materials to WPB have been announced and may offer some competition to aircraft needs. They include: National Housing Agency, Office of Rubber Director, ODT, Food Administration, and Facilities Bureau of WPB. "Each claimant acts as proponent of its own program and carefully examines the program of others. In this way, views of all interested parties are expressed. After full discussion of the program and requests of the respective claimants, the Chairman of the Requirements Committee, with the advice of the Committee, make allotments of materials to meet definite approved programs."

•

CONTROLLED MATERIALS PLAN Regulation No. 1, defining rights and obligations of industry under CMP, newly issued, deals primarily with methods of applying for, receiving and making allotments. Also it permits orders for fabricated Class A products requiring small amounts of controlled materials to be placed and filed without making formal allotments of the materials used.

Inventory restrictions under CMP are listed in Regulation No. 2. Purpose is to hold aluminum, copper and steel inventories to a maximum of 60 days forward requirements.

Nationwide distribution of the official CMP Class B Product list has been started. Items on the B list under the heading "Aircraft Equipment and Components (Airborne only)" procured by the Navy Bureau of Ordnance or the Army Ordnance Department, have been designated A products.

•

APPRENTICE AND TRAINING SERVICE has assisted an average of 1100 establishments monthly to organize on-the-job, short-term training and apprenticeship programs, WMC Chairman McNutt announces. Employment stabilization plans are being inaugurated in several industrial centers including Cleveland and Akron, Ohio.

A Fair Employment Practice quiz is being launched in the Detroit section to consider alleged discriminatory practices charged by the Citizens Committee for War Jobs of Detroit.

Lawrence W. Cramer, executive secretary of the Fair Employment Practice Committee, announced that Vultee Aircraft, Inc., "has taken steps to eliminate discrimination against war workers because of their race and color." This is in accordance with a Committee directive, following a public examination of complaints filed against the Tennessee division of the company.

•

A WAR DEPARTMENT APPEALS COMMITTEE is announced by NWLB to handle appeals on wage and salary adjustment cases for employes of government-owned, privately-operated plants turning out products for the War Dept. Members: For the War Department, Col. W. F. Volandt, assistant chief of staff, and Col. Ralph L. Hart, executive assistant to the Chief of Field Services, Ordnance Dept.; for labor, John Brophy, director of Industrial Union Councils of the CIO, and Fred Hewett, editor for AFL; for industry, Clarence Skinner, Washington manager of the Automotive Parts and Equipment Manufacturers Association and Henry S. Woodbridge, assistant to the president of American Optical Co. Rulings of the Committee will be final, subject to NWLB's power of final review and the right of any party to petition the Board for leave to appeal to NWLB within ten days of the ruling.

•

TOTAL VOLUME OF TRANSPORTATION in 1942, the Department of Commerce reports, increased by 28% over 1941, a record year-to-year gain.

Commodity transportation, measured by ton-miles, increased by 25%, while passenger miles increased by 45%. The railroads established all-time traffic records in 1942. Freight traffic, measured by ton miles, was one-third above 1941 and almost double the 1935-39 average. Railroad passenger-miles increased by more than 80% and the 1942 total was almost two-and-a-half times the 1935-39 average. Intercity motor truck performance has shown remarkable growth in recent years, but the increase in ton-miles in 1942 was only 7% over the total for 1941. Motor bus traffic between cities increased 50% over 1941 and was more than double the 1939 volume.

Air commodity traffic showed the largest relative increase, with a gain of 65% over 1941 ton-miles flown, largely because of record air-mail performance. This was about 3½ times the average freight carried in the 1935-39 period. Air passenger traffic declined slightly from record level of 1941, due to government taking over 40% of the equipment.

•

WAR WORKERS' TRANSPORTATION problems are receiving attention from several government sources. Attempting to centralize authority, the President issued Executive Order 9294 giving the Office of Defense Transportation authority over local transportation equipment.

However, a qualifying paragraph reads: " . . . ODT shall advise and assist Federal departments and agencies, state and local governments, and private organizations in surveying the need for and planning the provision of transportation service for the movement of personnel to and from war plants and establishments, and where necessary, initiate and develop such surveys and plans. Due consideration should be given to making such surveys and plans to all transportation needs of each area including those related to production in the war effort, agricultural as well as industrial, to military and Naval establishments, and to essential civilian services."

•

REGISTRATION OF WOMEN WORKERS, often proposed and discussed, has been postponed indefinitely, and probably finally. War Manpower officials now state that a voluntary enrollment will be tried only as a last resort in sections where labor shortages are acute. Legislation for a draft of women workers is even more remote.

Before enrolling women for war jobs, effective measures are to be taken to control migration of workers into the locality in question and to prevent piracy. Assurance must be given that war workers are being effectively utilized and that men and women already employed have been transferred from less to more essential jobs. Knowledge of the number and type of jobs waiting to be filled, and of the attitude of employes toward women workers will likewise be required.

Washington observers consider the WMC pronouncement a tacit admission of a considerable amount of under-employment and misdirected labor effort.

State laws and regulations are to be subjected by State legislatures to modification in order to permit women and minors over 16 to work in war plants when no serious health or safety hazard is involved, WMC spokesmen advise.

CONRAD CAMPBELL

Army to Help Firms Pay Worker's Transit Expense

Seeking to assure employe transportation to war contract plants during the coming months when supplies of gasoline and rubber will drop still further, the War Department's Transportation Corps has issued a directive asking all aircraft plants to set up Transportation Departments under an engineer or a competent executive.

Expenses incurred in this program are to be included in war contracts after the local contracting officer has approved the set-up. There is no standard cost arranged by the Transportation Corps in Washington and no definite plan is yet worked out for general application. Each factory must estimate its own costs and its own needs and then work with the contracting officer from the branch of the Army with which the plant is dealing.

The War Department seeks a working group geared to action aimed at keeping the workers on the job by getting them there on time, and by returning them to their homes as promptly and as comfortably as possible. Investigations conducted by the Transportation Corps reveal that a large percentage of absenteeism in war production industries has been and is due to transportation difficulties. The same difficulties have been found responsible for a steadily increasing turnover in workers. Both of these problems, the Army feels, can be solved by the institution and operation of the Transportation Departments.

Number of personnel required to set up the Department is left to each plant and contracting officer, but the Washington Transportation Corps headquarters offers several suggestions for the Department:

1. Certification of individual tire and gasoline applications, so that the worker need not leave his place in vital industry to deal personally with ration boards.

2. On-the-parking-lot inspection of tires at regular intervals, and advice to the worker on how to conserve tires and gasoline.

3. Dissemination among workers of reliable information on proper care of cars, tires, etc.

4. Assistance in the utilization of private cars to capacity.

Where added bus facilities are needed, the Transportation Department at any war plant should present a substantial case to the local representative of the Office of Defense Transportation, local transportation authorities and transportation companies. In some localities it may be deemed advisable to stagger working hours in order to transport workers efficiently with the equipment available. In such cases it is recommended that the plan be taken up with ODT and other war production plants in the vicinity so that a sound plan may be put into effect to achieve maximum use of the public system serving the area.

The War Department does not attempt to solve two other major problems currently facing transportation chiefs in large war plants: provision for blanket coverage of rider-driver liability in group riding, and "rationing" of rail and bus travel. The latter problem rightly belongs to the ODT and insurance companies are working out a plan to make a limited coverage to protect drivers in group riding cars at 50% of general coverage rates. This plan is not completed and hasn't been filed.

Since the Army Air Forces Wright Field does all procurement and contracting for the Navy's Bureau of Aeronautics, plants having Naval contracts for aircraft will fall in the same category of including expenses incurred by the new Transportation Department in their contracts.

Announcing! the STERLING 1000

New Electric Portable Sander

Vibrationless!

FASTER!
SMOOTHER!
BETTER!

Here is the sander you want and *need*... the NEW "Sterling-1000" Electric Sander.

For the first time in electric sanding history we announce the rugged, streamlined balanced "Sterling-1000," designed and built to meet today's heavy production demands and to overcome all previous objections to electric sanders. With this new vibrationless, streamlined balanced sander, we have eliminated all the curse of continuous breakdowns and nerve-racking vibrations to operators. Women operators like to use this new sander.

A NEW Kind of Sanding Action, Too

Orbital, circular. Thousands of abrasive grains cross and recross each other's paths with whirlwind speed and a *fast cutting,* scrubbing action that yields the smoothest surface you ever saw, on wood, metal, plastic, or composition. Excellent, too, for many rubbing and polishing operations.

Streamlined, balanced, counter-balanced, with high-powered motor, built like a rock for long life and tough use.

Write today for the "Sterling-1000" folder—a revelation in sanding.

STERLING TOOL PRODUCTS COMPANY

389 E. OHIO STREET — CHICAGO, ILLINOIS

This advertisement is one of a series which will appear this year as Consolidated's contribution toward a clearer public understanding of "aviation geography."

CONSOLIDATED

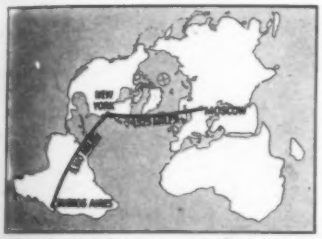
TO AMERICA'S FIRST PLANE SPOTTER

We don't know who you were.

But the night you went on duty marked the end of the world, as most Americans had always known it.

You were a symbol of the realization that oceans are merely hours across by air. You were an admission that the barriers of land and water had been lifted. You were our first bow to the new global geography where distance is reckoned by the skyways as well as by nautical miles.

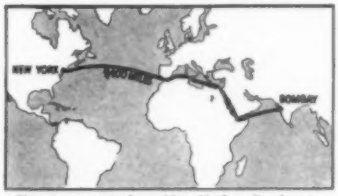
We are fighting the war today on that new global geography. We're fighting for remote pin-point islands in the Pacific because they can be potent air bases. We're fighting in the Aleutian fogs because from Kiska a bomber could strike at Detroit almost as easily as at San Diego.



New York is closer *to Moscow, by plane, than it is to our South American neighbor, Buenos Aires.*

There is no need to labor the point that this is an air-minded war. The newspaper headlines never let you forget it. And as you read them, remember that we must remain equally air-minded in victory.

The countries of this new, sky-linked world will be bound together more closely, geographically and physically, than our own states were at the turn of the century. Today, wherever you may live, no spot on the once-wide globe is farther than 60 hours away from your local airport.



The sea route *from New York to Bombay is about 9400 miles. It is a 3-week voyage.*

Today's skyward route *from New York to Bombay is about 7790 miles. Flying time: 39 hours.*

Realization of how the plane has shrunk our world is vital to straight thinking about the kind of peace that *can* last. With this new conception of global geography, you see the world as it is—a clustering of nations whose nearness makes them inter-dependent and interrelated. Without this new conception, you are looking at a world that used to be—a world where nations lived in the safety of remoteness, protected by distances that no longer exist and seas that have been narrowed to millponds.

FROM	TO	SURFACE TIME		AIR TIME	
New York	Chungking, China	11,300 M	31 days	7500 M	30 hrs.
New York	Moscow, Russia	5700 M	8 days	4525 M	23 hrs.
New York	London, England	3700 M	5 days	3482 M	17 hrs.
San Francisco	Brisbane, Australia	8200 M	21 days	7050 M	33 hrs.
Chicago	Fairbanks, Alaska	4000 M	8 days	2750 M	14 hrs.

Approximate traveling time *and distances as you have known them in the past and as you will come to know them in the Air Age.*

But understanding alone isn't enough. If the global community is to live together in freedom and enduring peace after the war, the nations which deeply believe in freedom and peace must possess air supremacy.

To bring this supremacy about, first in war and then in peace, is the aim of the tens of thousands of men and women who make up America's aircraft industry.

• • •

Consolidated Aircraft Corporation

San Diego, California • Fort Worth, Texas

Member, Aircraft War Production Council

★ ★ ★ ★ ★

QUICK FACTS FOR AIR-MINDED READERS

In 1929, Consolidated was already building America's biggest planes. The company is 20 years old this year.

• • •

Today Consolidated is building: the B-24 Liberator, (4-engine, long-range, land-based bomber)—PB2Y Coronado patrol bomber, (4-engine long-range flying boat)—PBY Catalina patrol bomber, (twin-motored, long-range flying boat)—the C-87 Liberator Transport, (cargo-plane version of the Liberator bomber).

• • •

Winston Churchill used a Liberator for his flight to Moscow. General H. H. Arnold flew in a Liberator from Brisbane, Australia, to San Francisco in the record time of 35 hours and 53 minutes.

A Liberator, dubbed the "Gulliver," carried Wendell Willkie on his round-the-world flight. The 31,000-mile route blazed by this Liberator will probably become one of the regular skyways of post-war aerial travel and commerce.

• • •

Consolidated was one of the first aircraft manufacturers to establish a training school for Army Air Forces mechanics and ground crew. "Camp Consair"—complete with barracks, officers' quarters, mess halls, laboratories, classroom buildings, and hospitals — adjoins the Consolidated plant at San Diego.

• • •

More than 2000 sub-contractors and suppliers, in many parts of the U. S., are working round the clock to provide many of the materials and parts for this giant Liberator.

AIRCRAFT ***DESIGNERS AND BUILDERS OF THE LIBERATOR, CORONADO, CATALINA, C-87 TRANSPORT***

XUM

Army-Navy Bulletins

AAF Meteorologists: AAF urgently needs 1,000 men ages 18-30 inclusive, to qualify as meteorologists. Successful candidates will be certified for voluntary induction into the Army as Aviation Cadets in meteorology, according to War Dept. Graduates will be eligible for appointment as second lieutenants, Army of the United States. Educational requirements are at least two years of college, a minimum of mathematics through calculus, and one year of college physics. Applications should be addressed to Commanding General, AAF, attention Aviation Cadet Section, Washington, D. C., for educational certification.

New Address: Effective since Dec. 20, 1942, office of Headquarters, AAF Western Procurement District, Material Center, has been located at 3636 Beverly Blvd., Los Angeles, Cal. Former address was 506 Santa Monica Blvd., Santa Monica, Cal.

Schildhauer

(Continued from page 18)

planes for a planned operation exceeded the capacity of the tanks. Auxiliary fuel tanks were dispatched by NATS and installed, permitting the fighters to cover a much larger area before returning. Blood plasma has been flown thousands of miles within a few hours, no doubt saving the lives of service men injured in battle.

"A vessel encountered engine trouble which required a new crankshaft. Surface transportation would have taken a month or more to reach the ship. But a Navy cargo plane with the shaft, which weighed 3,000 pounds, and two men to supervise the installation, arrived within a few days.

"On Friday, Oct. 23, N.O.B. Bermuda wired Norfolk, Va., to furnish 500 life belts by air to be shipped on that date. The shipment was packed and ready for shipment six hours after receipt of the dispatch. A police escort was secured to accompany the truck carrying the shipment to the port of embarkation, and the cargo was aboard one hour before scheduled departure time.

"On the same day the Commander Destroyers Atlantic sent a dispatch request for urgent shipment of life belts and rescue breathing apparatus to be delivered to five destroyers at a New England port before midnight. The dispatch was received that morning; a NATS special plane delivered the cargo two hours before the deadline.

"The following list of items shipped by air transport was taken at random from shipping orders in the files of the Bureau of Supplies and Accounts:

"Motor generator parts for anti-aircraft guns on vessels—4100 pounds. Droppable fuel tanks for combat aircraft—100 lbs. Periscope parts for submarines—300 lbs. Parts for torpedo boats—500 lbs. Gun repair parts for battleship—7,120 lbs. 1500 signal flags—2,650 lbs. Drive shaft for surface vessel—3,000 lbs. Electrical Spares for U. S. S. Saratoga—4,000 lbs. Aircraft engine—2,150 lbs.

"With the extension of service to routes laid out for the purpose of transporting men and materials to active operating Naval establishments in foreign areas, the Naval Air Transport is at present closely integrating itself with requirements of other national war agencies, such as the War Production Board, and the Board of Economic Warfare. In order to utilize space in returning aircraft such materials as ore, quartz crystals, rubber and other strategic supplies are flown back to this country.

Late War Photos

Official Air Forces Photo.

Glider Unloads: This is the first picture released by the Army showing how the nose on the Waco CG-4 glider opens upwards permitting a jeep to be driven out. The glider will carry one jeep or 15 men.

African Kittyhawks: Communiques mention Curtiss P-40 squadrons in North Africa, both with the westbound British Army and the Allies' Tunisian forces. This Royal Australian squadron downed its 200th enemy plane recently. Other Kittyhawks are making news in China and South Pacific.

British Press Service.

Wings Over Africa: Two formations of light bombers are shown passing each other over their desert base before leaving on one of the largest raids ever made by the Allied air forces in the Western Desert. The planes were not identified.

CAP Reports on 1942 Activities

Reporting the position of cra... planes, signaling lost planes ... to ground, and dropping supplie... survivors, were among the sig... cant services which the Civil ... Patrol performed in 1942, accor... to a year-end review issued by ... Office of Civilian Defense.

Pointing out that it had enli... 66,000 citizens with skills applic... to aviation duties, as well as se... thousand CAP Cadets now be... organized and trained, CAP repo... other important services, such ... special missions for the armed fo... and civilian defense organizati... towing anti-aircraft gunnery targ... tracking for anti-aircraft guns a... searchlights; tests of the aircr... spotter system; blackout inspect... at military posts, and camouflage ... spection and maneuvers with grou... troops in training.

CAP also during 1942: Develop... a network of courier services ... transporting urgent shipments a... key personnel between Army po... and war factories; maintained t... CAP Coastal Patrol to combat t... submarine campaign, checking ... enemy and saving many ships a... lives; furnished thousands of trai... men, through central files and lo... units, for placement in the Arm... Navy, Air Transport Command a... in CAA instructor and student c... pacities.

In addition, CAP: organized unit... a military plan with a Wing Com... mand in each state and subordina... units at more than 1,000 local ai... ports, all ready as aerial hom... guards in case of combat need.

Besides maintaining "the fin... way of civilian aviation," CAP h... "encouraged new developments bo... for the war effort and for the e... of aviation progress to follow." ... feels it is now a grown-up organiz... tion, beginning "to develop its ow... traditions in which we can all tak... pride."

Burden Names Banker Stanton's Assistant

Selection of Robert McLean Stew... art, Wall Street Banker, as executive ... assistant to Charles I. Stanton, Ad... ministrator of Civil Aeronautics, ha... been made and announced by Wil... liam A. M. Burden, Special Assistant ... Assistant to the Secretary of Com... merce.

Stewart came to CAA from po... of vice-president and director o... Harriman Ripley & Co., New York. ... Canadian born, he was educated in ... Canada and England, specializing in ... economics. He served in World ... War I with the Canadians in France, ... retiring from service as a captain. ... After the war he became assistant ... secretary of the Department of ... Soldiers' Civil Re-Establishment in ... Canada serving until 1927.

He entered investment banking in ... 1928 with the old National City Co. ... in Canada, joining the New York ... offices in 1931. He joined Harriman ... Ripley & Co. in 1934. He is 47, and ... became a U. S. citizen in 1937.

Call it Lightning!

– SAY THE PILOTS

NOBODY had time to name this Lockheed fighter plane when it was born. They just called it by a number, P-38.

Then the pilots sent it climbing over eight miles straight toward the stratosphere, up where even the highest-flying bombers couldn't go. They brought it screaming down out of the clouds like forked vengeance. They jammed down the throttle and it flew faster than any fighter ever flew before. They pressed the trigger-button and saw how *concentrated* fire-power from its cannons and machine guns could rip apart anything on wings—and there was only one name for it: *Lightning.*

So that's its name, a name it earned from British and American pilots alike, a name to watch: Lockheed *Lightning.* Lockheed Aircraft Corporation . . . Vega Aircraft Corporation . . . Burbank, California.

for protection today, and progress tomorrow, look to

Lockheed

FOR LEADERSHIP

Member Aircraft War Production Council, Inc.

Copyright, 1943, Lockheed Aircraft Corporation

★ ★ ★

People

Short Camdon Thigpen Kerwood

Sterling W. Camdon, Jr., who formerly trained AAF cadets at Riddle Aeronautical Institute's Carlstrom Field, Arcadia, Fla., has been made general manager of the Landplane division of Embry-Riddle School of Aviation, Miami, Fla. **Mac Short,** Vice President of Vega, has been installed as 38th president of Society of Automotive Engineers. Friends of **Clarence R. Mooney,** of NATA, and Mrs. Mooney sent messages of condolence from all over the country when the Mooneys' son, **Lieut. Robert H. Mooney,** AAF, died of wounds received while helping repel a Japanese bomber attack in China. He was buried with full military honors.

G. L. Lentz and **C. O. Nelson,** members of the contract service department of General Electric Co., Schenectady, N. Y., were recently praised by Lt. Col. John D. Howe, U. S. AAF, for "the superior manner" in which they instructed personnel in the care of turbo-superchargers in the Southwest Pacific. **Charles T. Cosser,** of the same department, working in the Middle East, was praised for technical efficiency with a bombardment group by Col. C. M. McGuire, AAF. **W. R. Thigpen,** United Air Lines' dtm in Portland, was recently judged "First Junior Citizen of Portland for 1942" by the Portland Junior Chamber of Commerce.

Maj. Bruce de Vazeille is setting up a press section for the Materiel Command of War Dept., and will be located for the next few weeks in MC's headquarters in the Munitions Building. **Fay Thomas,** who, along with **Charley Rochester** of the Hotel Lexington in New York, is known to about everyone in aviation, recently became manager of the Book-Cadillac in Detroit; within three weeks after he took over, he had most aviation visitors to Detroit staying at the Book. **William LaVarre,** of the American Republics Aviation Division of the Dept. of Commerce, is slated to do a research and statistical public relations job in South America for the group. He will handle all local public relations problems for the Rubber Reserve, airlines and other DPC projects.

Lt. Col. Charles "Chuck" Kerwood now functions in Washington and in the field as Chief of special liaison, special events and activities and Air Corps liaison officer to the Industrial Division of the War Dept's Public Relations Bureau. **Lt. Col. Joseph Edgerton,** former Press Branch Chief, is now with the War Dept.'s press branch. **Maj. Tom Compere** and **Capt. Herbert O. Johansen,** formerly with AAF's press branch, work with Edgerton. **Lt. Col. Don Starry** has been reassigned as Chief of the dependence placement section of AAF of Army Emergency Relief. **Maj. Stan Chester,** formerly Chief of special events under the AAF Bureau, is now Chief of the special events division of the Air Force under the Director of Personnel.

Maj. John Bruce Logie, review, section AAF public relations, is now working with Col. Nuckols, who replaced Col. Arthur I. Ennis as Assistant to the Director for Air Forces. **Capt. John Lay** is also now in the review section. **Lt. Robert A. Winston** and **Lt. Leon Shloss** have yet to be joined by their colleague **Lt. Philip Gustavson. Lt. Walter H. Neff** has arrived.

In the aircraft division of WPB **E. C. Walton** is still undecided on his resignation. **James W. Ford, T. P. Wright's** secretary, accompanied Wright, Wilson, Gen. Echols and Gen. Knudsen on their recent West Coast trip, acting as secretary for the group. **Harold E. Talbott** has been in and out of Washington on several trips since he resigned as Director of WPB's Aircraft Production Division.

Orson Welles has decided not to renew his contract with Lockheed, and will devote more time to his duties with the Rockefeller Committee. **Leonard Eiserer,** formerly civil aviation editor of **American Aviation,** is now an ensign, U. S. N. R., and serves as public relations officer at the Navy's Pre-Flight School at Chapel Hill, N. C. **George Shumway,** former managing editor of this magazine, is an ensign in the Training Literature Section, Training Division, Bureau of Aeronautics, Washington, D. C.

What Others Say

AL WILLIAMS—"Recent Washington news says a Post Office attorney recommends to the Civil Aeronautics Board the reduction of air mail rates for Eastern Air Lines from .3 mill to .147 mill . . . contending that the higher rate is 'excessive' . . . It would be a disastrous short circuit in our international airways plans if little bureaus were permitted to discourage expansion of our domestic airlines."

NEW YORK TIMES—". . . It is still true as it has always been that if we are to understand the present global war we must view it not as so many separate theaters but as a unit. Only by doing this can we understand the real role played not only by the forces of each nation but by the separate military arms of the land, sea and air . . . There is a theory, developed by the Italian strategist General Douhet, that modern wars can be won in the air alone. That theory can never be scientifically demonstrated in the present war. The attrition of the Axis by land and sea weapons and forces, as well as those by the air, has already been enormous. No one now contemplates abandoning the land and sea weapons that have already been built up. The real question of strategy, moreover, is not the academic one of whether it is possible to win a modern war in the air alone, but what particular balance or combination of air, land and sea forces is likely to be most effective."

CONGRESSMAN CLARENCE F. LEA—"The airlines, without fanfare, have done a conspicuously fine patriotic job in cooperating with Army and Navy programs and providing ships, transportation and personnel in aid of military service. Civilian planes and personnel are now brilliantly aiding the United Nations cause in every part of the world."

Webb Shadle Named CAA General Counsel

Webb Shadle, formerly with the Petroleum Administrator for War in a legal capacity, has been named general counsel of the Civil Aeronautics Administration, succeeding Richard Elwell, who has been commissioned a major in the Air Forces.

Shadle

After receiving his law degree at Columbia University in 1922, Shadle was appointed special agent in the Department of Justice, and following a brief service with this agency became partner in the law firm of Campbell and Shadle at Phoenix, Ariz. In 1925 he was associated with McCutchen, Olney, Mannon and Greene of San Francisco.

For a period of about 12 years he was counsel to the director of finance for California, and performed special assignments for the Governor.

Kotula Agency Named

General Aviation Equipment C... Inc., Ashley, Pa., and the Aviation Institute of Technology, Port Washington, L. I., N. Y., have announced appointment of Kotula Advertising... New York, N. Y., as advertising agents. First copy on a new campaign for General Aviation is scheduled soon for aviation trade papers, general magazines and direct mail. A series of ads. is also scheduled by Aviation Institute in aviation trade papers, to start soon.

New Control Centers

Civil Aeronautics Administration reports that the following have become control airports: Abilene, Texas, Municipal Airport; Houston Spring, Texas, Municipal Airport; Tucson, Ariz., Municipal No. 1; Palmdale, Cal., Municipal Airport; Daggett, Cal., Municipal Airport; Santa Barbara (Goleta) Cal., Municipal Airport.

Edits Aviation Page

Wayne W. Parrish, editor and publisher of *American Aviation* and *American Aviation Daily,* has taken over the editorship of the weekly aviation page in *Liberty Magazine*.

Lt. John Foy, former advertising manager of the same publication, is attached to Naval Transport Service, Norfolk, Va.

Patricia "Pat" O'Malley has returned to the public information section of Civil Aeronautics Administration in Washington after a leave of absence to serve in OWI's overseas division office in New York. Jennings **"Jay" Randolph, Jr.,** eight, who sometimes acts as receptionist at his father's office in the Old House Office Building, has already decided to be a pilot rather than a politician. He earned enough money recently to enable him to fly rather than come by train from Elkins, W. Va. His father elected **Senator E. H. Moore** of Oklahoma, unlike his defeated predecessor **Josh Lee,** is a flying fan. For the past 20 years he has traveled about the country on business trips in his own plane. **Tom Hardin,** formerly chairman of the old Air Safety Board, is now a colonel in the AAF, "somewhere in Africa." His postal address is Air Transport Command, APO 635, Headquarters, Africa Middle East Wing, Postmaster, Miami, Fla. **Justin Coogan,** AAF glider pilot, tells reporters he hopes to start a glider passenger and cargo airline after the war, probably in South America.

The B.F. Goodrich Airplane of the month
REPUBLIC P-47
Don't be fooled by armchair strategists who talk about the superiority of other nations' fighter planes. Answer their comments with the facts about Republic Aviation's P-47. The "Thunderbolt," as it is appropriately known, has an effective ceiling of 40,000 feet, a super-charged 2,000 h.p. motor, unmatched speed and fire-power. No wonder the United Nations consider this Republic ship to be their ace-in-the-hole. Leading aircraft manufacturers are stepping up plane performance with the help of B. F. Goodrich Silvertown Tires, Expander Tube Brakes, De-Icers and Feed Shoes. This month, B. F. Goodrich nominates the Republic P-47 as Plane-of-the-Month.
In war or peace
B.F.Goodrich
FIRST IN RUBBER

B.F. GOODRICH RUBBER RESEARCH FOR THE *Aviation industry*

Study of radial tire-growth as caused by centrifugal force!

IT HAS LONG BEEN KNOWN that tires tend to grow in radius as a result of centrifugal force, affecting the amount of clearance needed between a tire and its landing-gear strut. Today's faster-landing aircraft made this fact of greater importance to designers and builders of planes.

Mathematically, centrifugal force is known to vary directly with the square of the speed. Thus when speed is doubled—say from 20 to 40 mph—centrifugal force increases four times.

To measure the growth of a tire in inches, B. F. Goodrich engineers used a tire-testing machine, in which the road wheel, simulating movement of the ground beneath wheels during take-off and landing, was rotated at a speed of 140 mph. The tires measured were put on the swinging arm and brought into contact with the spinning road wheel.

A telescopic sight with a hair-line rule was focused at a fixed point on the tire's circumference so that any growth in the tire's radius could be accurately measured. The speed of the road wheel was varied from 140 mph down to 0 mph. Several sizes of tires were tested at these speeds.

Our engineers discovered that tire-growth varied only with the speed and *very little with the size of the tire tested.* In other words, at the same speed, a 30-inch and a 56-inch smooth contour tire grow about the same amount. The graph at the right makes this point clear.

Facts gained this way are of material help in designing landing gear as well as tires that will afford maximum safety for modern aircraft. The B.F.Goodrich, Co., Akron, Ohio.

LET'S GO! U.S.A. · KEEP 'EM FLYING!

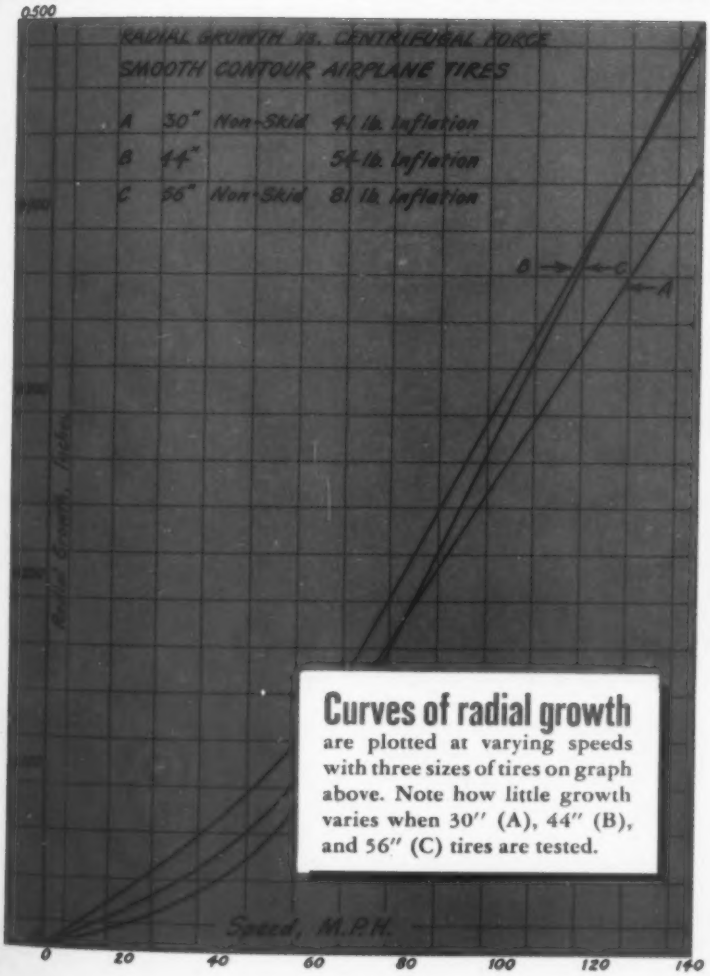
MAKERS OF B. F. GOODRICH TIRES AND OVER 80 RUBBER AND SYNTHETIC RUBBER PRODUCTS FOR AIRPLANES

Test developed to measure radial growth

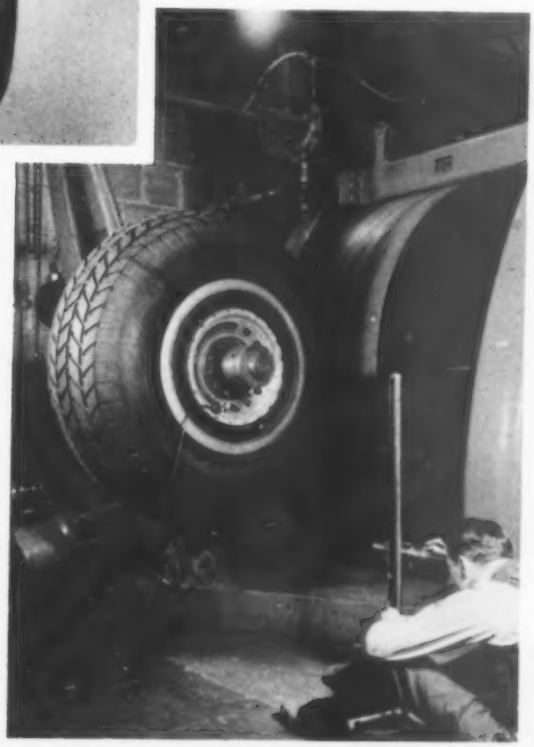
WHILE TIRES ARE IN MOTION!

Clearance of a tire in the offset and fork type of landing gear strut is reduced when tire radius grows due to centrifugal force. (Exaggeration of growth indicated by dotted line.) This has important bearing on landing gear design.

Sighting telescope on rotating tire to measure its radial growth. Hair-line rules on telescope lens permit accurate measurement in fractional inches. B. F. Goodrich Brake Tester was used to simulate action of tires during take-off and landing. Road wheel rotates at controllable speeds up to 150 miles per hour.



Curves of radial growth are plotted at varying speeds with three sizes of tires on graph above. Note how little growth varies when 30″ (A), 44″ (B), and 56″ (C) tires are tested.



In war or peace

B.F.Goodrich

FIRST IN RUBBER

XUM

DE-ICERS

DE-ICERS THAT DEFY THE ELEMENTS—B.F.Goodrich has pioneered in the development of rubber De-Icers, which protect the leading edges from ice. Most military and commercial aircraft today are equipped with these De-Icers to permit flying in all sorts of weather.

★

CRASH PADS—Another adaptation of B. F. Goodrich molded sponge rubber is illustrated here. The cushioning effect of the crash pad protects the instrument panel. Again, the benefits of extra light weight, increased cushioning and extra strength play an important part in added safety and long life.

★

PROPELLER FEED SHOE—Propellers, too, are protected from ice with this B. F. Goodrich device that feeds the propeller blades with anti-freeze fluids.

★

RIVNUTS—This hollow, threaded rivet can be installed and headed, or upset, while working entirely from one side. Developed for attaching De-Icers, it is adaptable to other aeronautical uses.

★

FUEL CELLS—The illustration shows one of many B. F. Goodrich Bullet Sealing Fuel Cells for military planes.

★

TIRES—For largest bombers or fastest pursuits, B. F. Goodrich *Airplane* Silvertown tires and tubes are engineered for the job.

B. F. GOODRICH ★ AERONAUTICAL DIVISION ★ AKRON, O.

Letters

Cleveland, Ohio.

To the Editor:

In the last issue of *American Aviation* I noted W. A. Patterson's comments on aircraft transportation; also noted your remarks. I would like to comment still further.

A review of transportation from the early days is sufficient to remind one that regardless of what the means are of getting about or hauling freight, it becomes a matter of transportation. Years ago steamboats plied the Finger Lakes carrying freight and passengers. Now they do not. The same products and more people are being moved to the same places but not by boat. The answer—railroads and better highways.

With the advent of the automobile and then the truck, someone conceived the idea of putting a body on a truck chassis and fixing it up with a few boxes for seats and then we had the bus. It did not take long to have the truck manufacturer see the handwriting on the wall, so Frank Faegol woke up the big boys such as General Motors and White, and they started making a comfortable deluxe bus. It wasn't long before the railroads discovered they were in the transportation business and bought out bus lines right and left, as well as freight lines, paying dollars they would not have had to pay had they started initially. Thus they paid for experience that the bus and truck operators had already gained.

After the airlines had demonstrated they could successfully haul mail, passengers and express and still be decidedly courteous to the traveling public—having patience with them and catering to their whims—the railroads turned over a new leaf and instead of the station agent insulting the customers, as well as the conductors insulting the passengers, they became very solicitous and improved their facilities to a large extent. All due, in my mind, to the fact that air transportation made imperative a change, plus the fact that a great number of people drove their own cars from place to place. The railroads had to make an extra-special inducement to the traveling public to get them to use their form of transportation.

I had occasion to pick up some freight at the terminal at Patterson Field, and was amazed at the bulk and number of pounds of freight which had been brought in by air. No one would believe it until they saw it. While the railroads have perhaps nothing to worry about, nor the steamships, they might as well forget the fact that they are railroads or steamship operators and become reconciled to the issue that they are in the transportation business and catering to the public.

The writer can see one of the biggest airlines in the making. When this war is over airplanes from the United States will fly to Capetown, Sidney, Melbourne, Manila, Hong Kong, Russia, England and Continental Europe. Frontiers are rapidly disappearing through the advent of the airplane.

I apologize for making these comments—not being a writer, but just a rim-cut old pilot, yet I could not refrain from doing so.

E. W. "POP" CLEVELAND,
The Cleveland Pneumatic Tool Co.

Obituary

Lt. Col. S. B. Altick

Lt. Col. Sherman B. Altick, 50, U. S. Army Air Forces public relations officer, died Jan. 16 in Walter Reed Hospital, Washington, after a long illness.

Before he went on active duty last April as a major in the public relations offices of the AAF, Altick was for 13 years aviation editor of the *New York Sun*. He was twice a winner of the TWA trophy, which is awarded annually to journalists for the best informed writing on air transportation.

In addition to membership in the Aviation Writers Association, Altick was a quiet Birdman and belonged to New York Aviator's Post 743, American Legion.

During the first World War Altick served with the 139th squadron of the Second Pursuit group in France.

Books

Wings Over America. By Harry Bruno. Robert M. McBride Co., New York. 333 pp. Illustrated. $3.00.

It is rumored in New York bistros that if Harry Bruno ever brought all of his ghost writers for *Wings Over America* into one place he could be accused of raising an independent army. Or stated statistically, if Bruno's ghost writers were laid end to end (no inferences intended), they would reach from Boston to Omaha. If such rumors are true, it is quite miraculous that the book holds together as well as it does.

It's an entertaining glimpse backward from the early days of aviation and one can forgive Public Relations Expert Bruno for arranging to have himself join the immortals by interweaving his own youthful interest in aviation with the activities of the Wrights and the Glenn Curtiss's. He can be forgiven because he does a very neat and readable job of it, and because there is some reason for inclusion arising from newspaper accounts of his youthful exploits. It makes a pretty story, anyway.

Bruno has written a subjective history of aviation, a fleeting glimpse with roots deep in aviation history, and yet lacking the fullness which might be desired and expected. Perhaps busy and harried Bruno didn't have the time to put his own deft fingers at work on the typewriter sufficiently to do a more complete and analytical job. Perhaps such a job wouldn't have been as entertaining as the one that found its way into print. It's hard to say, except that one has a feeling of being left unsatisfied at the samples given out in print.

Much of the contents are not new, but much familiar material is retold better than it's been told before. Certainly the Bruno slants are always good despite some obvious factual errors in attributing "firsts." Especially worthy of tribute is the pictorial section starting with the Wright plane and moving on to 1942. Considerable material in the book reflects a timeliness and one never knows whether the author was aiming for a newsreel photo-finish, or an historical review. Or perhaps a biography.

The author has a rightful claim as one of aviation's pioneers, especially in view of his confessions of press agent stunts, such cleansing of the soul being good for anyone, especially press agents. As one of the old Aeromarine's officials, Bruno can write with authenticity. As one of the six original Quiet Birdmen, his acquaintance with the great and near-great in aviation has been very widespread. Essentially Bruno's activity, and his book, have been concerned with the romantic, speculative, and audacious beginnings of aviation. It's well worth reading.

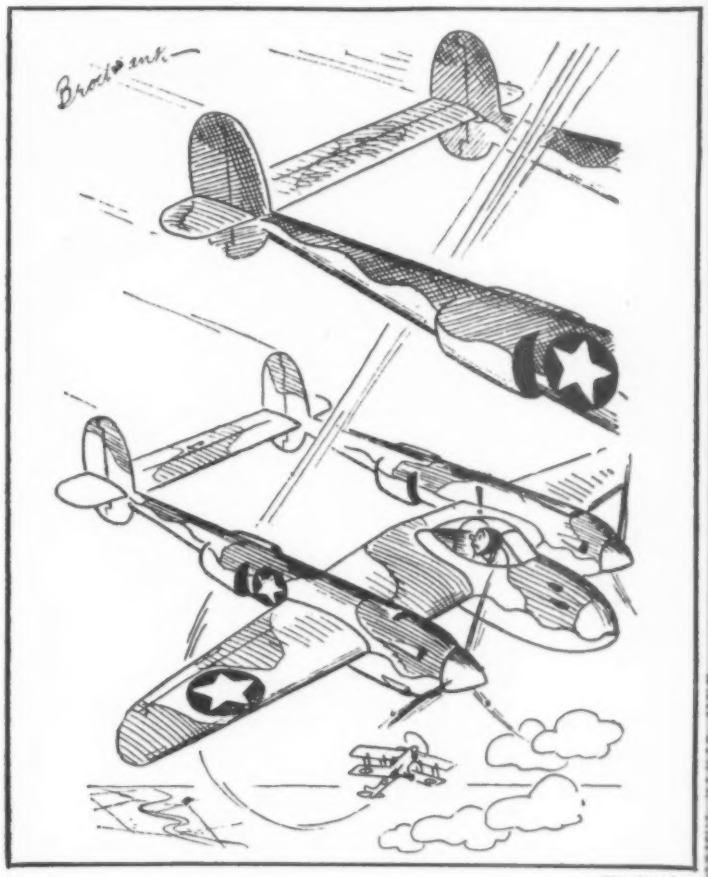
AVIATION DICTIONARY. By Assen Jordanoff. Illustrated. Harper & Bros., New York. 415 pp. $3.15.

The first comment one is likely to make on seeing Jordanoff's latest book is "Why hasn't some one done this book before." There are dictionaries, there are hundreds of assorted books attempting to explain away the mysteries of aviation. But no one, until Jordanoff came along, combined a dictionary of terms with illustrations. No matter how simple definitions are, they still are likely to baffle the layman. With illustrations, it all becomes absurdly simple. This book is a "natural." It should prove to be one of the most useful books in the entire realm of aviation.

There are more than 2,000 aeronautical terms precisely defined in parallel words and pictures, all alphabetically arranged, and even including "slanguage." There's been nothing like it before. It should be in every school room, every library, every aviation office and plant.

AIRCRAFT SPOTTER. By Lester Ott. Harcourt, Brace & Co., New York. 64 pp. $1.00.

Now in its third printing, and widely used in the Army and Navy, Lester Ott's handy book of aircraft identification is a well-prepared job. The photographs, drawings, silhouettes and descriptions of military planes in active service are all good. It isn't cluttered up with a miscellaneous assortment; the selection has been a wise one. A surprisingly large number of Japanese planes are included. Some of his editorial comments may be open to challenge, especially his belief that the Germans can still pull new aerial tricks out of the hat, but one can forgive his opinions in exchange for a book useful to military men and civilians alike.



The Aeroplane

OH

Drawn by Clayton Knight

FIVE REASONS WHY BOOTS IS A BETTER NUT

1. Lighter weight.
2. Greater re-usability.
3. Unaffected by oil, gasoline, marred bolt ends, or cross-drilled bolts.
4. Effective under high temperatures, low temperatures, and sudden temperature changes.
5. Has approval of all Government agencies for aircraft or engine construction.

THESE PLANES FLY WITH THEIR BOOTS ON

Boeing Flying Fortress.
Brewster Buccaneer.
Cessna Trainer.
Consolidated Liberator, Coronado, Catalina.
Curtis Commando, Dive Bomber, Plywood Plane, Scout Observation Planes.
Edo Floats.
Fairchild Trainers.
Grumman Wildcat, Avenger.
Martin Bomber, Flying Boat.
North American Mustang.
Republic Thunderbolt.
Vultee Trainer, Vengeance Dive Bomber.
Waco Glider.

FOR ENGINE MANUFACTURERS

The **Rol-Top** "hex" nut, latest addition to the Boots Self-Locking Nut family. Specially designed for engine application, the **Rol-Top** Nut does its job under higher temperatures, exposure to gasoline and other destructive elements.

XUM

They Fly with their Boots on— a million lbs. lighter!

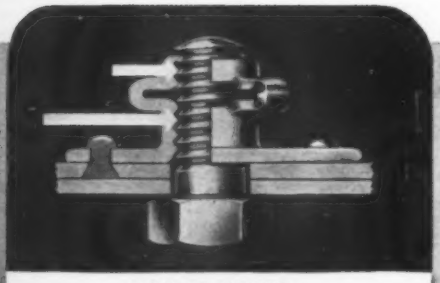
Fighter planes, bombers, cargo planes, trainers, gliders . . . all types of aircraft today "fly with their Boots on." And, because of this fact, they'll fly lighter—*by a million pounds.* For Boots Self-Locking Nuts—the important anchor and channel types—are stamped from sheet metal.

Besides making America's planes a million pounds lighter, they *save* a million pounds in strategic metals.

Government authorized, self-locking nuts . . . all-metal . . . "lighter and everlasting". . . therefore better in operation and maintenance.

Today engine manufacturers are making extensive use of another Boots item—the "Rol-Top," all-metal nut.

All of which means that we have ***better*** planes, and *lighter* planes . . . with less consumption of metal, when they fly with their Boots on.



HOW IT WORKS

The Boots Self-Locking Nut is one-piece, all-metal—withstands severest vibration. The top (locking) section is displaced in a downward direction . . . locking threads are out of lead with load carrying threads of lower section.

Upon insertion of bolt, top section of nut is extended to engage with threads of bolt. A constant force is thus established which locks nut firmly into position. Axial thread play is eliminated.

BOOTS

Boots Aircraft Nut Corporation

Self-Locking Nuts for Application in All Industries

GENERAL OFFICES: NEW CANAAN, CONNECTICUT

XUM

Runciman, BOA Chief, Forecasts Big Airline Gains in Passenger, Mail

AIR transport planes will probably carry all mail between places more than 500 miles apart, and almost all long distance passenger traffic, but will definitely not supplant general cargo shipping, in the opinion of W. L. Runciman, A.F.C., Director-General of British Overseas Airways Corp., who spoke recently in London.

His views coincided in some measure with those expressed recently by W. A. Patterson, president of United Air Lines.

Substantial excerpts of his speech, forwarded exclusively to *American Aviation*, follow:

The war, particularly since America joined in, has focused much public attention on air transport and widely divergent views are held and expressed about what it can really do. All agree that it can do a great deal and that there will be an immense extension of the use of air transport after the war. What form is this extension likely to take?

You can move almost anything anywhere by air if you really set out to do so and can get adequate and suitable equipment. And you can move it very fast, so that in an age of speed, the more extravagant claims of American publicity have led some to suppose that all forms of surface transport are either already obsolete or will soon be so. But you will move your load by air in small units, and the "all by air" school of thought (an optimistic term for the mental processes involved) seems generally to disregard the millions of tons of raw materials and of finished products too which move many thousands of miles about the world even at times of great trade depression and a high degree of national self sufficiency.

The whole of the United States domestic air lines which formed the most highly and economically organized system of air transport in existence before the war carried in the year 1940 rather under 120,000,000 ton miles. A single moderate sized cargo vessel in a single peace time years carriers three times as much. Moreover the cost per ton mile for the air lines was about 30c, while the similar cost for the ship per ton mile before the war was round about 1/30th of one penny. Ship costs are likely to go up and air costs will almost certainly come down, and it would not in any case be accurate to argue from this comparison that air transport is 900 times as expensive as sea transport but for general cargo the difference is, and looks like remaining, very large indeed.

It seems, therefore, unlikely that for some time to come air transport will replace the cargo carrying ship, or for that matter the goods train, particularly where low grade freight is concerned...

Since its principal characteristic is speed, air transport has an obvious advantage where people or things need to be moved swiftly over long distances. Mails are the principal example of this and the lead given by the British Empire in the Empire Mail scheme by which all first class mail traveled by air is likely to be almost universally followed where distances are involved greater than can be covered overnight by surface transport . . .

Subsidy Important

Passenger traffic is rather different. Here comfort and convenience come in as well as more speed. Air transport was already before the war, beginning to cater for quite a lot of long distance passenger traffic which previously went by rail or sea or not at all. Passenger traffic is sensitive to the prices charged and so long as costs are expressed in terms of money it is likely to remain so. Thus, it is probably unwise to argue that because small armies are now transported over long distances by air, mass movements of human beings will take place by air in time of peace unless they can do so at a cost which can be mentioned in the same breath with the cost of surface transport. The possibility of offering air transport to the public at rates not more than say twice the cost of the fares charged by surface transport on most routes still depends and, in my view, will for some time continue to depend, upon the amount of subsidy open or disguised which the nations of the world are prepared to pay to air transport as a whole.

On many routes in Europe air fares before the war were quoted which when the gain in convenience and time is taken into account (and sometimes even when they are not) were more favorable to the traveler than the corresponding rail or rail and ship fares. These air fares were in most cases only possible on the basis of a subsidy though certain routes such as London-Paris involving an inconvenient rail and sea journey and used by many people to whom price was relatively unimportant and might hold their own with no outside aid. There is good reason to believe that with recent improvements in technique and material there will be more such routes wherever the density of traffic permits concentrated operation.

Looking overseas, the North Atlantic is an obvious example of a route, with a high potential density of traffic. But, for all the aircraft we hear about which almost daily cross the Western Ocean, it is not an easy route to fly over, particularly in winter time, and if really regular schedules are to be maintained it calls for aircraft of much higher performance and operating at much greater heights than are necessary in temperate and even tropical climates. The numerous optimistic estimates of fares which might be economically charged on this route seldom or never allow for this.

Return fares across the Atlantic of £50 or even less have been mentioned fairly freely. The cost per aircraft mile flown on Pan American trans-Atlantic service in 1940 was $5.20. To make money at £50 return you would by comparison with Pan American probably have to double the size of your craft, nearly double its speed, operate it at half the cost per mile, never vary your route summer or winter, and fill every seat every voyage all the year round. I should like to think that this was a just measure of the progress of the air art in three years, but I fear it is and will remain for some time a great deal too good to be true.

Cost Was 60c

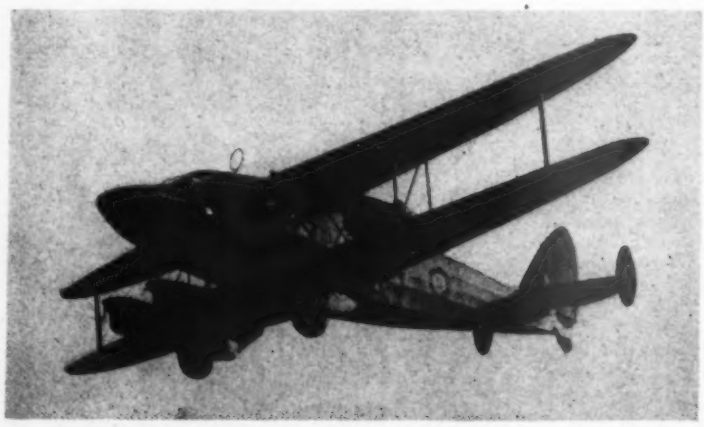
To finish with costs, the operating costs of the United States domestic air carriers in 1940 was 35 cents per ton mile offered or 60 cents per ton mile carried. For the long range overseas services the costs were about double and the American figures are of the same order as those achieved by the best European carriers and by the British Imperial services in their respective spheres. It looks as though technical progress since then has taken the form of improving speed, performance and comfort rather than reducing costs, and it is only partly true to say that this same progress could in any case have been entirely applied to reducing the costs while keeping the performance constant.

How the thing will work out after the war is still anybody's guess, but my own, for what it is worth, is that if speed, performance, and comfort are kept to the minimum which is consistent with safe operation and what the public will expect, the mileage costs might be halved in the foreseeable future, but that if progress continues to take the form of improved performance they will probably remain pretty well where they are.

Much, therefore, hangs now as it did before on the extent of the subsidy which air transport may expect to enjoy. For political reasons the employment of aircraft and air crews is likely to be stimulated, but just as it is fantastic to suppose that everything will travel by air so is it fantastic to suppose that all those now serving in the Air Forces of the belligerents or employed in wartime aircraft construction can be absorbed into a peacetime economy. War is a notoriously wasteful business and most people can readily see that the useful life of an aircraft in time of peace is very much greater than in time of war. What is not so readily understood is how very much more work an aircraft does in a year if operated under regular peacetime airline conditions than the same machine will do in time of war even when engaged on transport work.

The whole of the domestic air line system of the United States when the country entered into the war was served by about 350 medium sized aircraft. It is assumed that after the war air transportation within the United States will be so developed as to handle two-thirds of the normal Pullman traffic, plus one-third of the normal railroad day coach traffic, plus as much more newly created traffic, plus ten per cent of the total present movement of express and parcel post; plus all the first class mail between points connected by air; and if the number of points directly served by air transport be increased from the present 200 odd to 5,000, thereby bringing air transportation within 30 minutes highway travel of 90 per cent of the people of the United States; and if airlines were to handle an amount of trans-Atlantic travel equal to the total first-class and cabin-class traffic to and from American ports of the best pre-war years, and the same on the Pacific, and the same between the United States and South America, the total transport fleet required for the operation of all those services would amount, in dollar value, to rather under one month's production of the aircraft industry at the peak rate foreseen for 1943.

(Turn to page 46)



Airliner With RAF: This old De Havilland 86B airliner is now doing communications work for the Royal Air Force.

British Line Prepares

Another British steamship company, the 102-year-old Peninsular & Oriental Steam Navigation Co., has warned its stockholders that it must prepare to meet airline competition. A. O. Lang, deputy chairman of the board, was quoted from London as telling stockholders that "we may be obliged to take powers to permit the company to engage in the air transport of passengers, mails and freight, as complementary to our sea services." Cunard Line stockholders were told the same thing last year.

他們來了

"...they have come"

Here's another Northrop technique

now helping to speed U. S. warplanes abroad

BEFORE a warplane reaches the final assembly line, hundreds of small metal parts must be fastened together into wingtips, engine nacelles, tail surfaces and other sub-assemblies.

Many of the small parts in these sub-assemblies are *spot welded* one to the other, and formerly this demanded tedious one-piece-at-a-time cleaning and preparation.

Not so, any longer. Today by a new Northrop-developed technique the whole sub-assembly is fastened together by what are called "skin-tights". The job of cleaning and preparation is all done at once, in a single quick bath.

Then, still held fast together, it all goes in one piece to spot welding machines—and comes out finished.

This new Northrop development is being made available to other U. S. plane builders. So are other techniques by the Northrop group.

In return, other plane manufacturers inform Northrop of their new ways of building warplanes faster, with fewer man-hours.

And this business of trading techniques — of putting aircraft production on an "all-for-one-one-for-all" basis—is one reason that U. S. planes are now striking in such numbers on so many far-flung battle fronts. It's one reason oppressed people in many lands now look upward for deliverance — now are able to say in joy, "THEY HAVE COME!"

NORTHROP AIRCRAFT, Inc.

Northrop Field, Hawthorne, California

MEMBER AIRCRAFT WAR PRODUCTION COUNCIL, INC.

CHECKING IMPACT STRENGTH OF LUMARITH

REG. U. S. PAT. OFF.

PLASTICS FOR U. S. AIRCRAFT

The outstanding impact strength of Aero-Quality Lumarith plastics is made visible to the human eye by the Gjon Mili repetitive flash photograph. The 12-lb. iron ball (4½" in diameter) is dropped from a height of 10 feet on ⅛" thick sheet of transparent Aero-Quality Lumarith plastic. The 12-lb. ball is shown hitting the Lumarith and bouncing in the air, leaving the sheet intact.

Transparent Lumarith sheets are cold-formed or heat-formed to make the windows of cockpits and turrets for many United Nations planes and gliders. Aero-Quality Lumarith protects flyers against severe sunburn.

Celanese Celluloid Corporation, 180 Madison Ave., New York City, a division of Celanese Corporation of America. *Reps.: Dayton, Cleveland, Chicago, St. Louis, Detroit, San Francisco, Los Angeles, Washington, D. C., Leominster, Montreal, Toronto, Ottawa.*

CELANESE CELLULOID CORPORATION

The First Name in Plastics

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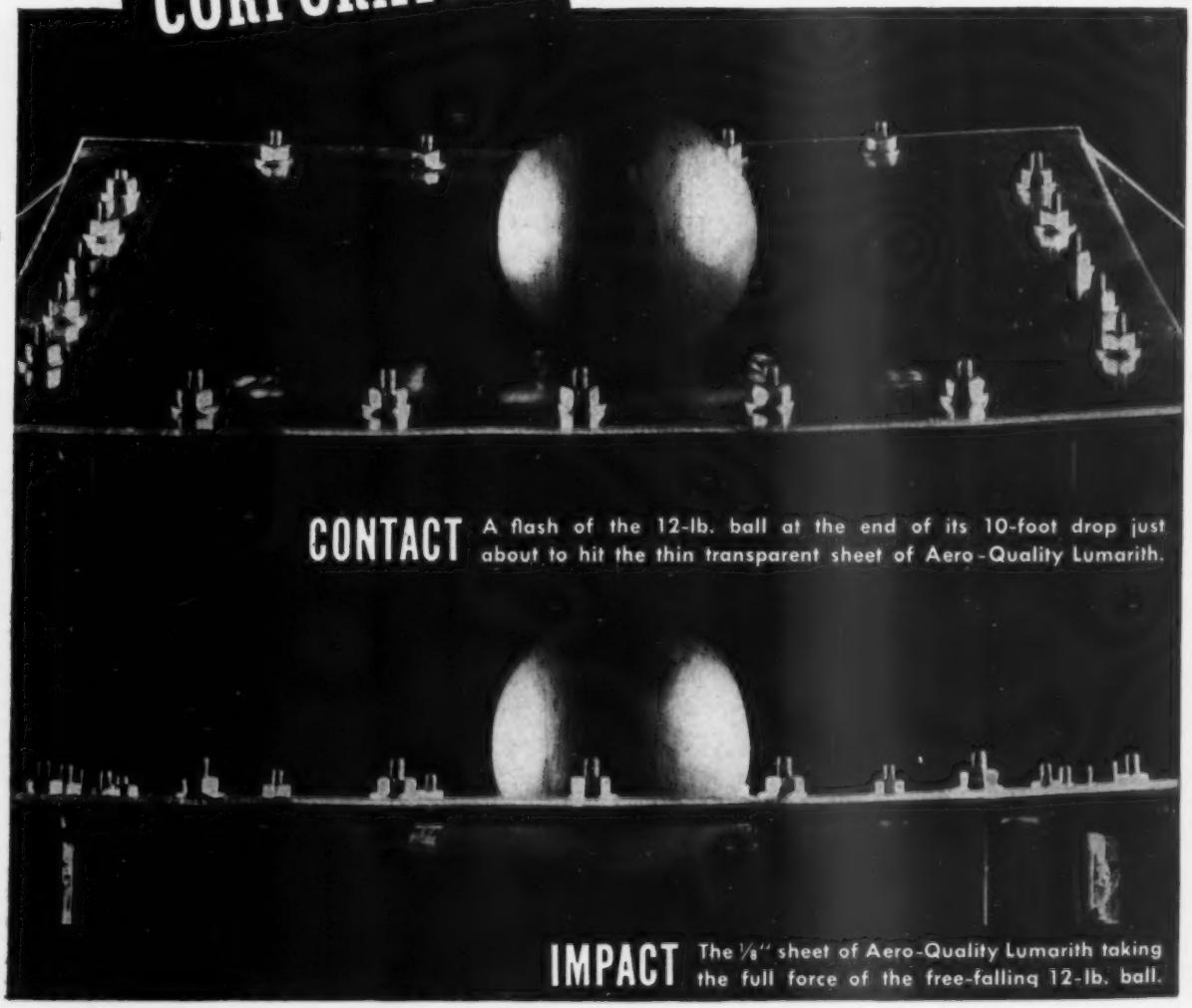

CONTACT A flash of the 12-lb. ball at the end of its 10-foot drop just about to hit the thin transparent sheet of Aero-Quality Lumarith.

IMPACT The ⅛" sheet of Aero-Quality Lumarith taking the full force of the free-falling 12-lb. ball.

XUM

REBOUND Camera catches the heavy ball in two positions on the way down; then again at the instant of impact; and finally, six flashes of the rebound. . . . In similar tests ¼" Aero - Quality Lumarith transparent sheets have withstood the impact of the 12-lb. iron ball hurtling down from a height of 36 feet.

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XUM

Independent Safety Board, Aviation Committee Favored by Nichols Group

BRANDING as a "serious error" the abolition of the independent Air Safety Board, the Select House Committee to Investigate Air Accidents has gone on record as favoring the re-establishment of that body.

In submitting its final report to the House on Jan. 7, the committee, headed by Cong. Jack Nichols (D., Okla.), also urged Congress to make "adequate provisions" for government agencies having charge of civil aviation, and advocated formation of a permanent committee of "air-minded" Congressmen "to work with those government agencies for the protection and development of interstate and foreign commerce."

Discussing the Safety Board, the report said that "your committee is convinced that the abolition of the independent . . . Board pursuant to Reorganization Plan No. IV was a serious error and that the . . . Board should be reinstituted. The former Air Safety Board included in its personnel very competent and experienced pilots who were able to recognize and did recognize faults in the air transportation system which could cause air accidents. The Board promptly made recommendations and suggestions to the then Civil Aeronautics Authority and to the air lines for correction of these faults and improvement of the system in anticipation of accidents.

"The net result was a period of 17 months free of serious accidents, a period which coincided with the life of the effective work of the Board. We believe that if the Air Safety Board had been continued as an entirely independent body some of the accidents which followed its abolition would have been anticipated and avoided.

"Reorganization Plan No. IV after abolishing the Air Safety Board transferred its functions to the CAB, an economic body not composed of aviation experts. The CAB created a Safety Bureau with power to investigate accidents but without power to make reports or recommendations except through the Board. It did not grant to the Safety Bureau the independent powers formerly enjoyed by the Air Safety Board. The Safety Bureau exercises no independent authority. Consequently, the functions of the former Air Safety Board have largely degenerated under the Safety Bureau into conducting investigations following accidents."

The committee noted that it had been shown the CAA's blind landing system at Indianapolis. "It is our considered judgment that the Congress has been unwisely parsimonious in failing to make adequate provisions for scientific experiments and test installations of new equipment, such as this system, looking to the advancement of aviation."

Later in the report, the committee returned to its discussion of the Air Safety Board, stating: "After the investigation of many air accidents, your committee believes that had the independent Air Safety Board been continued they might have anticipated the causes and thus have prevented some of the accidents which occurred.

"We further believe that the duties of the CAB are so many and so important that the qualifications of members of this Board must primarily be those of statesmen and economic experts to solve the national and international questions which are presented to them. The membership of the Board is not, therefore, chosen from those who are technically acquainted with the highly specialized problems of air navigation.

Praises CAB

"Your committee has received the most cordial cooperation from the members of the CAB and is convinced of its sincerity and ability. Nevertheless, we believe that the duties of the Board are too numerous for it to give the time and effort requisite to the consideration of the manifold safety problems arising in aviation. It is, therefore, suggested that men should be selected who are specialists in air safety to make independent recommendations to the Board, rather than that the Board should weigh the evidence submitted in accident reports and then attempt to create regulations to effectuate the conclusions which it may reach. At the present time the Board sits in judgment on the wisdom of its own regulations. This is not judicially sound.

"The day is not far distant when probably hundreds of thousands of citizens of the U. S. will own and operate aircraft. If the CAB is to regulate this traffic, determine the cause of air accidents and sit as a trial court on all offenders of Civil Air Regulations, it will have an enormous task. We believe that the CAB will find it necessary to appoint commissioners to perform many of these duties. The CAB is composed of only five members. It may be wise to expand the membership of the Board to enable it to cope with the multifarious national and international problems over which it has jurisdiction."

Aid Recovery

The conclusion of the 74-page report states: "Your committee is convinced that the proper utilization of aviation facilities and of aeronautical enterprises developed in the United States will have a marked effect on the economic recovery of our country at the end of the war. Because of the dislocation of many other industries, it will require a long time to reestablish them on a productive basis. The loss of hundreds of steamships during the war will retard the restoration of our foreign commerce. Cargo and passenger-carrying aircraft, however, will be in full production and will be available for immediate use in international air commerce to carry to the world such of our merchandise and produce as is then available for export." It then urged "adequate provision" for aviation agencies and establishment of a permanent committee.

"While the committee can at this time say but little concerning new designs in the field of transport aircraft, it can at least hint from its observations in the leading aircraft plants of the country that this whole industry will be revolutionized after the present war, and that it will become one of the great industries of this country," the report said.

"Your committee has been permitted to view the airplanes now under construction and to see the designs of other aircraft, which are in the blueprint stage. Some of these are so revolutionary and of such military significance that we cannot divulge the full facts even to the Congress. We can only hope that you will believe us when we say that the future security and economic prosperity of the U. S. may depend upon your willingness to give wholehearted and constructive cooperation to civil aviation—now. Very seriously we say to you that that nation which is best prepared to enter world air commerce on a large and effective scale at the end of this war may be the first nation to recover its economic stability. Now is the time to prepare for the post-war period and to advance the interests of the U. S. in international air commerce . . .

Capacity Available

"Recent history proves the absolute necessity for a going aircraft industry in constant operation in order that productive capacity may be available at all times that can be turned quickly into the mass production of combat and transport aircraft to meet the exigencies and requirements of an adequate national defense. It is the considered opinion of your committee that this can best be accomplished by our government fostering a strong and ever-expanding civil and commercial aviation program."

The committee reported that it investigated 27 serious and six potentially serious air accidents in 1940-41 and 1942, filed 20 reports with Congress and prepared and introduced four legislative bills. "We have submitted, and will re-submit to the 78th Congress a bill (H.R. 7764, 77th Cong., 2nd sess.), granting to the Federal government exclusive jurisdiction over the navigable air space. . . ."

Generals Please Note: Pennsylvania-Central Airlines, which furnishes crews for the operation of planes of the military personnel staff located at Washington, has added flight pursers to the crews. In other words, when a general goes to Shangri-La in his private plane he is not only flown by a PCA pilot, but a PCA purser attends to his personal needs. Pursers shown above, left to right, front row, are C. P. Taylor, W. E. Nitz, L. G. Sease, E. D. Rumford, C. L. Kennedy, E. S. Moorehead, Jr. In the back row are A. M. Olsen, R. G. Kinsman, R. A. Martin, W. H. Adams.

Braniff Awarded Route to Laredo

Braniff Airways has been awarded a route between San Antonio and Laredo, Tex., service to be started when the national defense no longer requires a delay in inauguration.

The CAB amended Braniff's certificate on AM50, Houston-San Antonio, Houston-Corpus Christi, to include the new service.

T. E. Braniff, president of the company, stated that Pan American Airways and its subsidiary CMA and Braniff have already agreed to an interchange of equipment. CMA operates into Nuevo Laredo, Mexico, across the river from Laredo, Tex. It furnishes service to Mexico City.

XUM

For Safe, Efficient Wartime Service

TWA INCREASES MAINTENANCE WORK PER PLANE

With urgent wartime transport demands calling for more intensive use of airline equipment, TWA has greatly increased the amount of maintenance work per plane. During this past November, for instance, maintenance hours per TWA plane totaled 3,289 as compared with 2,225 in November, 1941.

Thus TWA's highly skilled maintenance corps, by devoting more hours to each plane, have readily upheld TWA maintenance standards—keeping our vital air transportation service functioning efficiently and dependably for the nation.

TRANSCONTINENTAL & WESTERN AIR, INC.

TWA
The TRANSCONTINENTAL Airline

Northeast Demands Hearings On Boston - New York Case

A demand that a hearing be held —before Apr. 1, 1943—on its four-year-old application for a Boston-New York route was made to the Civil Aeronautics Board Jan. 5 by Northeast Airlines.

Pointing out that this is the "oldest convenience and necessity application now pending before your Board without hearing or determination thereof," Samuel J. Solomon, NEA president, asserted that "a failure of the Board to forthwith hear and pass upon this application until after the war would be unwarranted, contrary to the public interest, and contrary to the interest of the sound development of this petitioner."

The use of the airplane in the war is selling the American people on air transportation, and they will expect an adequate air service to be available to them promptly after cessation of hostilities, Solomon continued. Commodities for civilian consumption are becoming exhausted, and manufacturers will desire to revert as soon as possible after the war to the satisfying of civilian needs, he explained, adding that the airlines must be in a position to help with transportation of persons, property and freight.

"A present and prompt determination of what new air routes are necessary in aid of these objectives in consonant with the several studies now being undertaken both by governmental as well as private initiative with respect to necessary plans in aid of our economic welfare in the post-war era; the air pattern must form as integral part of these several considerations," the petition stated.

"It would be inimical to the public interest were the actual inauguration of an adequate air service deferred until after the war, and delayed merely awaiting the necessary first step, i.e., the determination of applications for indefinite lengths of time, from one to three years. Petitioner respectfully submits that this Board should now, and to the fullest extent possible, anticipate these needs of the people of the United States.

"The present commercial route of your petitioner, although it is vital to the territory which it serves, was not profitable before the War, and holds promise, with the return of Peace, of being financially operable only with substantial mail pay. Its short mileages, in conjunction with the character of the area served, do not permit the full utilization of equipment and personnel by this carrier, or the development of adequate traffic. Unless new mileage, serving communities of high air traffic potential, is added to the present route, the petitioner, upon the cessation of hostilities or the discontinuance of its present military cargo operations, will be confronted with: (a) Liquidation of its air services, vital to the New England area; (b) Merger with another carrier, or carriers, or (c) Allowance of unusually high mail rates.

"The cessation of the petitioner's present military cargo operations and the return to mere presently certificated services would entail unprecedented losses due to higher expenses experienced since the beginning of the war, which will not cease immediately with the cessation of hostilities. To require these losses to occur, even pending a post-war determination, considering the customary duration thereof, would be unwarranted and most unfortunate, and not in the interest of the public, the postal service or the air carrier. Petitioner believes, and therefore avers, that it is essential that the Board forthwith fix and determine the additional authorizations to be granted the petitioner for its survival, so that inauguration of such service and the resulting effect upon its system finances may be realized at the earliest possible moment.

"The acquisition and retention of equipment and personnel cannot be postponed for the period necessary for post-war hearing and decision on this matter. Petitioner believes that it is the duty of an air carrier not to contribute to the shock of peace by the discharge of its surplus personnel who are currently engaged in a vital war service, but that the air transport industry should not only retain those persons whom it currently employs, but should affirmatively absorb into its operations and the public service those persons in the armed forces now serving as pilots, navigators, mechanics and otherwise, and afford to them an opportunity to have immediate employment. The plans and policies of the petitioner in this respect must be controlled by the Board's action on this application, but nevertheless should not be held in suspense until a determination is had thereon long after the actual termination of the War. Obviously, if this petitioner is to be faced with a long continuing period of uncertainty as to its future destiny in the air transportation pattern, it would be entirely unfeasible to pursue the foregoing constructive policy. Rather such indecision would necessarily become one of the mediums of creating further economic chaos through the discharge of present well-trained personnel. On the other hand, if this petitioner is authorized to operate the service proposed in its application it will be able not ony to retain its present personnel but also to attract and assimilate sufficient employees for the development of a preeminent service in the important area covered by its enlarged route.

"Likewise, upon the cessation of hostilities, the petitioner will be able to purchase and absorb into its operations equipment which it believes, and therefore avers, will be available at costs drastically lower than heretofore experienced. Such equipment, incorporating the numerous aeronautical developments of recent years, would be highly desirable to meet post-war standards of service and safety. Faced with uncertainty as to its future operations, such purchases would not be justified.

"The present inability of petitioner to engage in essential planning for the future is in sharp contrast with that of the present carrier operating between Boston and New York. That carrier is presently in a non-competitive position; it will at all times have a certificate of convenience, even though ultimately it be determined that there should be competition. It is therefore in a position to visualize and mature plans for the post-war period. Its personnel is assured of continued employment, and it can consummate plans both for the acquisition of needed additional personnel and the securing of new equipment, all with the safe knowledge that its planning will redound to its benefit with the resumption of peace."

Invasion: Women have invaded another job that at one time was exclusively handled by men. Geraldine Simmons is shown loading cargo abroad a TWA plane at LaGuardia Field, New York. TWA has three women at LaGuardia checking and loading mail, express and baggage.

WAL Reports '42 Traffic Gains

For the first time in its history, Western Air Lines operated 25,000,000 revenue passenger miles in 1942, according to recent announcement from **Burbank.**

This gain, 6.57% over 1941, was made even though the company performed 26.87% fewer revenue miles during the year. Express pound mileage likewise gained, the 1942 total of 567,032,833 lbs. representing a 100.93% increase over the previous year, and air mail poundage, 632,387,092 in 1942, was 15.74% over the figure a year earlier.

Number of Western's employe's increased 66½ per cent during last year, and proportion of women went from 16 to 30 per cent.

Accidents Decrease

Accidents in non-scheduled flying decreased 77% in December, 1942 from November, according to the Safety Bureau of Civil Aeronautics Board. However, December accidents were 40% over the same month in 1941. There were three fatal accidents in non-scheduled flying currently and one in scheduled domestic carrier flying.

AA Showed Mail, Cargo Gains in '4

Though operating with less th half of its usual equipment dur 1942, American Airlines, Inc., Ja son Heights, L. I., N. Y., approach pre-war levels, due to "improv maintenance and schedules," accor ing to announcement.

Estimated air mail carried dur the year totaled 14,397,689 lbs., a increase of 51.2% over 1941, and ex press has been figured at 12,043,5 lbs., 118.4% more than in the pre ious year.

Total passenger miles operated 1942 have been estimated as in ex cess of 400,694,991, or a decrease less than 13% from 1941; 868,7 passengers are judged to have us American's facilities last year, decrease of less than 16% from year earlier.

As part of its wartime activiti American, with the Navy, train pilots in "all phases of multi-engi operation and (they) were giv practical experience . . . others we taught the technicalities of flig control, navigation, radio applicati meteorology, and the mechanics vital to carrying on the wartim air program."

Passenger Fare Lowered 10% by PAA, Panagra

A reduction of about 10% in pas senger fares between the Unite States and Central and South Amer ican points has been announced b Pan American Airways and Pa American-Grace. Reductions ar effective Mar. 15.

Juan T. Trippe, PAA presiden said that the lower fares are de signed to pass along to the travelin public a reduction in travel cos aggregating over $1,000,000 yearl

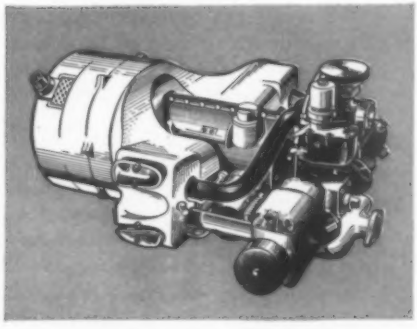
"The replacement of marine-typ aircraft with high-speed landplanes including the four-engined stratoclippers, has made possible certai operating economies," Trippe said "Savings the company has thus bee able to effect in passenger-mile op erating costs are being passed on t the traveling public, both here an in Latin America . . ."

The U. S.-Buenos Aires fare drop from $550 to $495; U. S.-Canal Zon from $160 to $130, with correspond ing reductions to other principa cities.

Harold J. Roig, Panagra president said: "These reductions are no made for the purpose of stimulating travel which in these war times must be manifestly unnecessary and im proper. We are today carrying about seven times as many passengers a we did at the outbreak of the war in Europe."

Fare from Miami to Lima, Peru will drop from $354 to $320, with corresponding reductions to other points on the Panagra system.

As the mighty PT boats of the U.S. Navy roar into action, they carry with them their own source of vital electricity – Lawrance Auxiliary Power Plants. These portable powerhouses, compact and light in weight, are designed to meet modern combat demands for a reliable flow of current to operate gun turrets, torpedo hoists, radio, lights, and galley hot plate. Lawrance Auxiliary Power Plants have been in action since Pearl Harbor; have given many thousands of hours of dependable, attention-free performance. Being produced today in ever-increasing quantities for aircraft as well as PT boat installations, Lawrance Auxiliaries are playing an important role in America's drive to Victory.



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Normal continuous power output 5KW.
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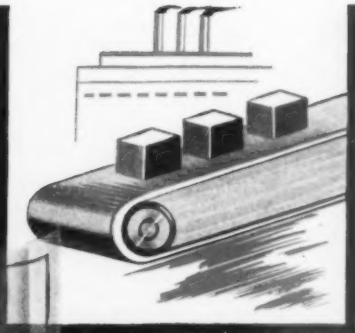
RELAYS



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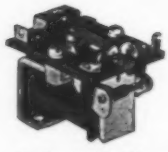
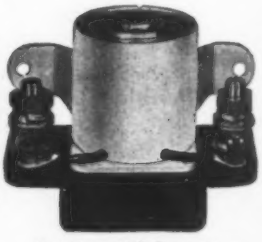


Series 195 Relay

THE B-4 SOLENOID CONTACTOR is used for starting motors in cargo planes, for turret control in bombers. It's a 24-volt, single pole contactor rated at 200 amps continuous, 1,000 amps surge. It withstands acceleration exceeding 10 times gravity; operates from sea level to 40,000 feet, from —60°F to +170° F. In the same class are types A-3 (12 volts, 200 amps continuous), B-5 (24 volts, 50 amps continuous), B-6 (24 volts, 100 amps continuous), B-7 (24 volts, 200 amps continuous). All built to U. S. Army Air Force specifications. Send for B-4 Bulletin for further details on these units.



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A COMPLETE LINE OF RELAYS SERVING AMERICAN WAR INDUSTRY

Freedom of the Air' Policy Urged by Croil Hunter

The addition of a policy of free-
m of the air to those freedoms
aranteed by the Atlantic Charter
ould be a boon to the war effort
d to the peace to follow," Croil
nter, president of Northwest Air-
es, told the annual convention
the National Association of Retail
cretaries in New York on Jan. 11.
Expressing the opinion that the
plane "can hasten the end of the
nflict and immediately progress
ward new business horizons," Mr.
nter praised Vice President
nry A. Wallace and CAB Chair-
n L. Welch Pogue for their "ad-
nced thinking" on freedom of
air.

"It was gratifying to see a press
ease from Washington recently,"
nter continued, "that stated that
United States is going to seek
understanding on commercial
rld airline rights in the post-war
rld before the end of the war and
at no treaty is necessary to estab-
sh sound principles and that, there-
re, there is no point in waiting
til after the war to reach under-
ndings. The policies the United
ates will advance involve three
ndamentals:

"'1. Establishment of the "right of innocent passage" through the air over any foreign country. The principle means that non-military aircraft could fly over any country, so long as they abide by the regulations made by that country for its own commercial aircraft.

"'2. Establishment of the "right to free landing" on the airports of any foreign country to refuel or for technical reasons. This principle means that non-military aircraft could use foreign airports so long as they did not pick up passengers or discharge them, and so long as they complied with regulations.

"'3. Establishment of the principle of "freedom of the air." This principle means, any country could license commercial aircraft to engage in commerce between its own country and others, or between two or more foreign countries.

"'A parallel, negative principle is that commercial aircraft would not be permitted to engage in "intranational" commerce except in their own country. In other words, foreign planes could not pick up passengers or freight in New York and land them in Chicago, and our planes could not pick up passengers or freight in London and land them at Liverpool.'"

Hunter also noted that "there has been some concern among our allies and neutrals over the advantage that our country will have in international air routes by reason of our present military operation. Undoubtedly the adoption of the principle of freedom of the air would reassure them that we seek no advantage, and that as soon as hostilities have ceased, they will be enabled to develop their own transportation systems. As a matter of fact, such an understanding now would, in many ways, clear the atmosphere as there is great immediate need for additional international commercial air transportation. . . . The problem of averting a world-wide post-war depression and the predicted great challenge to our economic system after the war can and will be met by the planning that our military as well as civilian leaders are now doing. It then becomes only a matter of securing an equitable distribution . . . we should be able to solve a relatively simple problem of finding the means of distributing throughout the world food and goods to save lives and to provide a new basis on which to rebuild. . . ."

Contrast: Western Air Lines' Capt. Robert Conover, left, wears a regulation WAL uniform, but Marshall Wooster, WAL's divisional chief pilot at Burbank, right, has on the government-provided winter "uniform" worn by military cargo contract pilots. Consisting of fur-lined flying jacket, mukluks, sweater, gloves, helmet, goggles, parachute and jungle kit, the outfit costs about $500.

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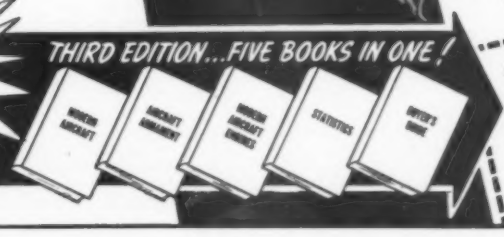

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XUM

UNIVERSAL AIRLINE GUIDE Opens Office in Chicago

Chicago offices for *Universal Airline Guide*, new monthly publication of airline schedules, routes and other data, to be launched in March by American Aviation Associates, Inc., have been opened at 139 North Clark Street, in the Chicago "Loop." The telephone number is State 2154.

The new publication will have a subscription rate of $5.00 per year, and will contain much useful information pertaining to air travel, air transportation, air express and air mail.

Heading the Chicago office as managing editor of the *Guide* is Stuart K. Chase, long experienced in publishing airline schedule information. Born Oct. 2, 1900 in Meriden, Conn., Chase attended public schools in Norwalk, Ohio, and was graduated from high school there in 1918. He attended Oberlin Business College in Oberlin, Ohio, 1918 and 1919, going from there to Hillsdale College at Hillsdale, Mich. where he received

Chase Whitney

his A.B. degree in 1923. He was a member of Delta Tau Delta.

In 1925 he joined the sales department of the Library Bureau Division of Remington Rand, Inc., remaining four years. He joined *The Official Aviation Guide* in 1929 shortly after it was established, and edited that publication from 1929 to 1940. He was president and manager of the publishing company from 1932 to 1940.

On leaving the *Guide* company in 1940, he organized the Commercial Award Pin Company to deal in proficiency awards for school commercial departments and continues to head that company.

Assistant managing editor of *Universal Airline Guide* is Harold D. Whitney, for 13 years with United Air Lines. Born in Detroit, June 23, 1905, Whitney attended Highland Park High School in Detroit, graduating in 1923. One year was spent in Highland Park Junior College, and in 1925 and 1926 he attended William and Mary College. From 1926 to 1930 he was engaged in real estate and with the Michigan Tool Co., Detroit, becoming purchasing agent for the latter company.

On March 1, 1930 Whitney joined Stout Air Lines in Detroit as stock clerk, was transferred to Cleveland a few months later and when National Air Transport took over the company, he was made a combination cargo handler, radio operator and dispatch clerk. In 1931 he was transferred to Chicago as dispatch clerk and subsequently made assistant chief radio operator which position he held until March, 1934 when he was moved to Newark as relief man on radio, cargo and passenger station. Later he became chief passenger agent until his transfer to New York in 1935 as reservations clerk, and later, as reservations manager.

In September, 1937, Whitney was transferred to Chicago as assistant general traffic manager which position he held for three years, specializing in schedule work. He was made secretary of the United Air Lines schedule committee about two years ago, holding that position until he joined American Aviation Associates Jan. 2, 1943.

Details of the new publication were scheduled to be in the hands of airlines by Feb. 1. Editor and publisher is Wayne W. Parrish, and business manager is Thomas E. Lindsey, although they will retain their headquarters in the main company offices in the American Building, Washington, D. C.

Airline Pilots on Army Work to Wear Special Uniforms

Civil airline pilots and other personnel engaged in work under contract for the Air Transport Command will wear special uniforms and insignia in the future, the War Dept. announced Jan. 12.

With more and more employes being engaged exclusively on work for the Air Transport Command, this step has been decided upon to designate ground and air crews which, while actually operating in a civilian status, are actually flying and servicing the planes which are supplying all sorts of war material to the fighting fronts scattered throughout the world.

Flight crew members will wear standard United States Army officers' uniforms with specially designed plastic buttons, a distinctive disc insignia representing the Kitty Hawk memorial on the shoulder straps, and a blue embroidered hexagon shaped emblem with the letters "U.S.-A.T.C." on the lapels. Pilot wings will be standard "ATC" approved wings for each classification of pilot.

Members of ground crews will wear standard non-commissioned officers' uniforms of the United States Army with plastic "ATC" buttons and lapel emblems the same as flight crews.

WAL to Ask Route

Western Air Lines has indicated to CAB its intention to file application for a temporary certificate from Lethbridge to Whitehorse via Calgary, Edmonton and Grand Prairie, and beyond Whitehorse to (a) Anchorage via Fairbanks, and (b) Anchorage via Northway.

Airline Commentary

Whether or not the Post Office Dept. makes a profit from the air mail service has long been a moot question . . . However, there seems to be no room for argument in the figures for the fiscal year 1942, which ended last June 30 . . . No official announcement has been made, but the PO's revenues from air mail postage stamps exceeded by $10,000,000 the amount paid to the domestic airlines for hauling that mail. . . . It is proper to subtract from that amount about $2,000,000 for direct expenses such as air mail field post offices, railway mail services, etc., but that still leaves an $8,000,000 profit. . . . A few short years ago we wrote a big story when the air mail service showed a $500,000 profit. . . . But bigger things are to come. . . . With lower mail pay for the airlines (CAB has cut some rates), the cost of the air mail service to the PO will show no appreciable gain in the near future. . . . Therefore, for the fiscal year 1943, ending June 30, 1943, a profit of $24,000,000 is predicted. . . . For fiscal 1944, the profit may hit $31,000,000. . . . Some idea of the growth of mail may be seen from the fact that air mail pound-miles were 40.6% higher in fiscal 1942 over 1941. . . . This year they will increase another 40%. . . .

●

Credit for one of the best calendars of 1943 goes to Western Air Lines. . . . The company has included a world air map, an airline route map, information on priorities, air mail, express, and a chart showing military insignia of the armed forces. . . . We predict it will be one of 1943's most well-thumbed calendars. . . .

●

One of American Airlines' most effective public relations schemes has been the "commissioning" of certain persons as Admirals of the Flagship Fleet. . . . Steady customers, aviation officials, members of the press (our membership number is WA502, if you care to check) have all been so honored. . . . Seldom, however, does a "commissioning" get as much publicity as did that of Lee Wesson, of American Aviation Corp. . . . The Jamestown, N. Y. *Post-Journal* announced it in a three-line 18 point headline: LOCAL MAN GETS PROMOTED AIR LINE ADMIRAL. . . .

●

A former American Airlines pilot now flying for the Air Transport Command is a "Short Snorter" in a big way. . . . He has pasted paper currency of about 15 countries end to end and has signatures from big-wigs all around the world. . . . Length is about two yards, probably a record. . . . You'd better have your "Short Snorter" bill with you if you ever run into him. . . .

●

Speaking of "Short Snorters," it seems that there's another organization in the aviation industry called the "Kee Birds." . . . United Air Lines house organ calls it the "infamous organization of Flitters of the Frozen Flyways." . . . Members of the outfit are those stalwart flight officers who have flown 100 or more hours above the Canadian border area, therefore, entitled to wear the organization's official pin, depicting a bird, quite similar to a penguin, sitting on a very frigid North Pole and lustily crying 'Keeeristmas, it's cold!" . . .

●

CAB notes: John Marshall, former CAB examiner, has been promoted from captain to major in the Air Forces . . . In addition to being an examiner, Johnny had the not-so-easy job of being assistant to Board member Edward P. Warner . . . Robert J. Barlow, who left his job as CAB examiner to work in St. Louis a year ago, is back with the Board in the rates and audits division . . . Working hard these days, with little publicity, are Edward Leasure and Francis Brown, of the formal proceedings division . . .

●

The Civil Aeronautics Board finally broke down and made the airline monthly reports public again. . . . They've been on the restricted list since early last year when someone decided that they contained military information. . . . Now all the supposedly secret data have been weeded out and the public can have a look again. . . .

E. B.

NIGHT FIGHTER . . .

WONDERFUL organisation by brains behind the scene, initiative, skill and courage of gallant men and—this must not be overlooked—superlative performance by aircraft, all combine to establish the R.A.F. supremacy in the air night and day. There must be no " margin for error " in the performance of high powered aero-engines ! They must give immediate response to the pilot's demands, even under the terrific buffeting of battle conditions.

Even in the fiercest dog fight power and speed must be maintained. When engines are " fed " with air, oil and fuel oil free from impurities, they give of their best. That is why on night fighters, battle 'planes, indeed, all types of fighters, spotters, bombers, you will find Vokes Filters in operation. The 99.9 per cent. filtration efficiency claimed for Vokes Filters is not a mere laboratory test bench figure. Vokes Filters, we are proud to say, have proved their value to the fighting forces under the most gruelling battle conditions in the air and on land and sea.

* * *

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XUM

Actions of the Civil Aeronautics Board

Order No. 2087, Dec. 22, 1942: Directed United Air Lines to show cause why the Board should not make final the findings and conclusions which fixed at .3 mill per pound-mile the rate for transporting mail on United's routes 1, 11, 17 and 57, effective Jan. 1, 1943.

Order No. 2088, Dec. 28, 1942: Authorized Russell L. Snodgrass, director of Railway Express Agency, Inc., to hold several interlocking relationships with various other companies.

Order No. 2089, Dec. 21, 1942: Directed National Airlines, Inc., to show cause why the Board should not make final the findings and conclusions which fixed at .3 mill per pound-mile the rate for transporting mail on National's routes 31, and 39, which was effective as of Jan. 1, 1943.

Order No. 2090, Dec. 22, 1942: Directed Transcontinental and Western Air, Inc., to show cause why the Board should not make final its conclusions fixing TWA's rate for transporting mail on routes 2, 36, 37, 38, 44 and 58 at .3 mill per pound-mile effective Jan. 1, 1943.

Order No. 2091, Dec. 29, 1942: Fixed mail rate for Colonial Airlines, Inc.'s route PAM No. 1, at 21.6c per airplane mile, effective Dec. 1, 1942, applying to months when average daily mileage is not more than 1,577 miles.

Order No. 2094, Jan. 1, 1943: Granted permission to Mid-Continent Airlines, Inc., to withdraw its complaint against United Air Lines.

Order No. 2095, Jan. 2, 1943: Temporarily exempted all air carriers providing service to and from Cincinnati, Ohio from provisions of section 401(a) of the Act, 1938, during flood conditions there, so that they can use facilities of the Municipal Airport, at Dayton, Ohio until the flood has subsided.

Order No. 2096, Jan. 4, 1943: Authorized Eastern Air Lines, Inc., to suspend service at Baton Rouge, La., intermediate point on route 5, for 60 days, beginning Dec. 15, 1942, since airport facilities there are only "partially completed."

Order No. 2097, Jan. 4, 1943: Revoked Order No. 1427, issued Dec. 5, 1941, which authorized Transcontinental and Western Air, Inc., to perform air service on the lines of Marquette Airlines, Inc., and dismissed applications of these lines for approval of a contract regarding this arrangement.

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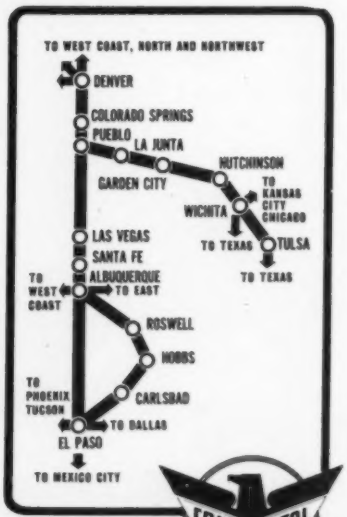
MONTERREY
and MEXICO CITY

Now you can fly to Monterrey and Mexico City (via El Paso) on fast sky schedules... Continental, through its connections with American Airlines, offers this new daily service... to help speed war production... to bring closer our fighting Ally and Good Neighbor south of the Border.

Cooperate by Flying during Mid-Week



CONTINENTAL AIR LINES

Runciman

(Continued from page 34)

Indeed the chief characteristic of air transport up to now has not been how much capital it has needed in the form of aircraft but how little. Witness another calculation for which also I am indebted to Dr. Edward Warner of the United States Civil Aeronautics Board. If the cost of the Queen Elizabeth had been invested in trans-Atlantic aircraft it would have provided a fleet sufficient to run a trans-Atlantic service starting from New York and from London every hour of the day from 9 o'clock in the morning until 10 o'clock at night 365 days a year, and incidentally this fleet would be able to handle comfortably all the first class and cabin class trans-Atlantic travel that moved by surface vessel in the best pre-war year. Whether the running costs of such a fleet would bear the same relation to the running costs of the Queen Elizabeth is of course a very different matter.

You could flood the market with aircraft quite cheaply by mass production but operating costs will not fall in proportion. Even if you treated aircraft like razor blades, buying them as cheaply, and throwing them away as readily instead of maintaining them, you would still have a long way to go.

In the light of all this what is the true place of air transport in a properly organized and balanced world transport system? I think that it will probably carry all the mails between places more than 500 miles apart and a great deal of the passenger traffic between such places. It will carry the mails because it will always be worth the Government's while for the sake of good communications within its territories to pay in mail contracts or in subsidy whatever price is necessary to secure this and the extent to which the air will be able to quote fares attractive to passengers will depend very largely on the amount of mail moving along any particular route, though there will be routes which will be self-supporting on passenger and freight traffic alone.

It will probably not be worth any ship owner's while to build very fast luxury liners again though cruising traffic might justify the luxury without the speed. But I myself think that it will still be worth while building mixed passenger and cargo vessels of moderate speed though this will depend largely on how much the human race moves itself and its goods about its planet in the years to come. And you are committed to your ship for the life of some 20 years; you have to renew your aircraft every five so that you have four times the opportunity of keeping up to date.

I do not expect general cargo shipping to be seriously affected one way or the other by air competition, at least in my lifetime . . .

I shall be surprised if long distance rail travel of the more luxurious sort survives many more years. Here again, the border line is likely to come at the distance which can be easily covered outside the normal working hours of the day, though price will obviously enter it. Short haul goods traffic will still go by road because it will be a long time before the gain in time by air offsets the loss of time of trans-shipment from a van or lorry to an aircraft and back again, and it will be a longer time still before air transport habitually collects or delivers your goods at your door.

Some people would say that all this means merely that the air is going to skim the cream of everybody's traffic. I do not believe this to be [illegible]. In most forms of transport the [illegible] prefers to have his loads as heavy as possible and although if you [illegible] habitually carried the great and rich and earth (and their letters and [illegible] costlier goods) there may appear to be some loss in prestige in losing such [illegible] to someone else. I have often wondered whether the advantages of transport [illegible] them are equal to the trouble they cause and the special accommodation they require. We in air transport are used to the trouble and since we provide vehicles and not moving hotels the accommodation problem is less difficult for us. I have even heard ship owners say that they would sooner be without a mail contract than with one. The railways will probably keep most of the third class domestic traffic in nearly every country where distances are not very great. And generally so far as air transport stimulates the desire for travel and by virtue of its greater speed enables people to make journeys who would otherwise not have time to do so, transport as a whole will benefit unless the universal experience of more than one generation is to be belied.

For transport is first and foremost transport, and a transport aeroplane is only another vehicle. The business of carrying people and things about the world in an aeroplane and the business of carrying them about in a ship or a railway train or a truck are much more like each other than air transport is like air fighting or air bombing. People and things tend to travel by the means which, having some regard to cost, is the most convenient for the class of traffic to be moved. A balanced system of transport is not one where every mode of conveyance is pressed into service along every route but where road, rail, air and sea each perform the services they do best. We shall none of us survive unless we give the public who, whether as passenger or taxpayer, will have to pay for it the transport it requires.

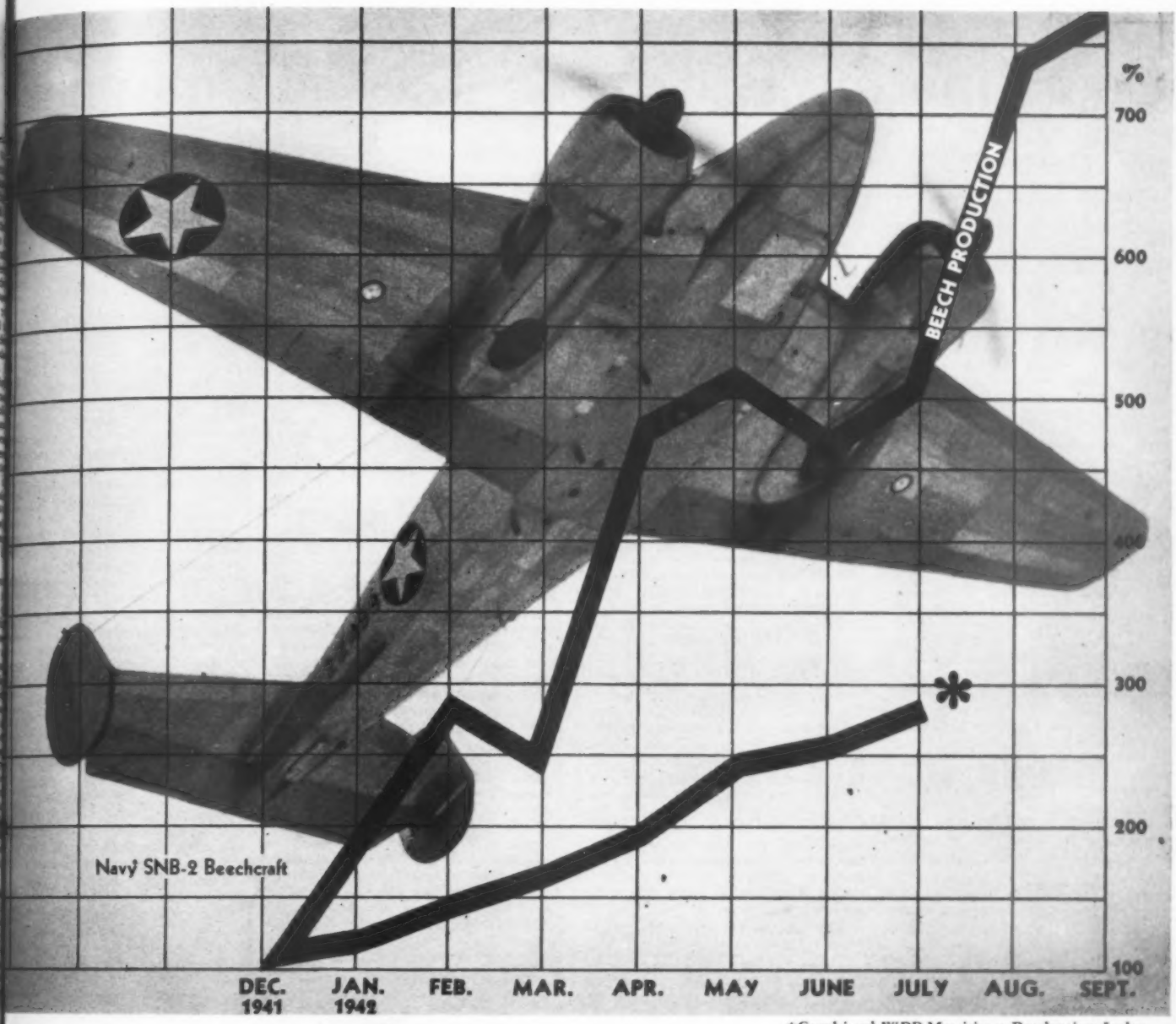
There will be a certain amount of trial and error before this is accomplished. Some think the error will be less if a wise Government or other authority plans for us what each of us may have and where, others believe that the free or fairly free play of competition will more speedily bring us to an equilibrium where we can all prosper. I am not concerned here and now to judge between these views, but only to record my conviction that both now and in the future there is a place for every form of transport and that we shall all find plenty of opportunity to exercise our wits and line our pockets in discovering how best to carry the greatest possible loads in the best possible way.

PAA Expands

Pan American Airways has announced it has begun construction of a terminal addition which will double facilities for handling passengers and cargo at Pan American Field, Miami. This increase is expected to make possible handling of passengers from two Clippers at once, and to provide more room for loading and unloading planes arriving only a few minutes apart.

NAL Asks Route

National Airlines has filed application with the Civil Aeronautics Board for a mail-passenger-property route between Tampa and/or Miami and Balboa, Canal Zone.



*Combined WPB Munitions Production Index

Performance

Like the aircraft it makes for our country, the Beech organization has demonstrated a high performance factor. The graph above indicates the rate-of-climb of Beech production in the first year of our total war.

Beech Aircraft

CORPORATION

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WICHITA, KANSAS, U. S. A.

XUM

Coordination is Key To Mass Maintenance

If Airlines Do Servicing, Writer Proposes Production Liaison Organization

By E. J. FOLEY

IN SEEKING a solution to the problem of airline production-maintenance, we have in previous articles surveyed two basic possibilities: the airline specialist-shops and the manufacturers' maintenance establishments.

If the first possibility is conceded to be the correct answer, we find two approaches by which the airline attains mass production levels in its maintenance. We have automatically eliminated the unnecessary and unjustifiable extravagance of the cut-and-try method. The first approach is that of close airline collaboration with all manufacturer's production staffs to assure absorption of all mass-output data. The second implies the specific designation of an organization to serve any airline in cooperation with all manufacturers.

Foley

To deviate for a moment, let us again remind all manufacturers of components and aircraft alike that this problem along with many others can be reduced to its simplest terms *only* through their joint creation of a transportation vehicle, an operator's airplane.

Approaches Identical

Our two approaches are necessarily identical in ultimate result. They both will, hopefully, produce a union of mass-production methods and airline maintenance experience. This union will in turn permit maintenance productivity to meet the future demands upon the air transport industry. The difference between the two is the who-does-it factor. Will each airline work with every manufacturer or will the existence of a third party clearing house be appreciated?

That the first approach will appeal to many, is granted. Among the reasons for its acceptance is the fact that many, if not all, of the manufacturing contacts are maintained in day-to-day business—no problem there. Secondly, it may be felt that first-hand information has an indispensable value. Less pleasant but quite as vital a reason for support of direct collaboration is the element of inter-airline professional jealousy. Without elaborating on this point, it is the element that supports the extravagance of each airline testing every new product, etc.

In the face of the impending new business, it seems unlikely to us that there would be any reluctance on the part of the manufacturer in cooperating in such a project. The contention of certain airline personnel that such collaboration would require the release of too many trade secrets doesn't hold water as we see it.

Any technique which we may use, however, necessitates a third party's cooperation if it is to be successful. The first concept of the third party has him in the role of an equipment manufacturer. The process of transition between production line and production servicing shop demands in the case of large units, movable gear for carrying the units. We have previously recommended that such gear to represent the optimum in desirability should permit servicing as well as carrying.

Third Party

In the specialist shops the equipment items such as jigs, fixtures, production test stands, etc., will be multiplied many times over their present quantities. So we see the role of the third party immediately expanding. This expansion assumes quite logically that the home-made airline equipment falls short of being the answer to the production need.

Our third party, still simply an equipment manufacturer, will necessarily maintain close contact with all airlines and with all manufacturers for whose units he contemplates providing accommodations. In this respect, he meets the basic requirements for the established organization we spoke of as our second possible approach to the attainment of airline production-maintenance.

The practical representation of our second approach, we feel, lies in the expansion of the function of our equipment manufacturer until he assumes the capacity of an overall production-maintenance coordinator. The scope of his action would encompass all the operating area between manufacturer and operator for present maintenance needs as well as future planning. As coordinator, he would remain a separate corporate entity to be retained or called in as needed by any or all airlines.

Unfair Attitude

This concept we know will draw criticism. The criticism will come from the cataloguing of our coordinator in the class with efficiency experts, consultant industrial engineers, etc. Unfortunately, isolated cases of excesses both in fees and resulting red tape originating in such services have been highlighted in the public mind through publication. The result has been an unfair attitude of suspicion if not outright condemnation on the part of many who admit that gains might be attainable through such coordination.

Since we know that the type of service which our second approach offers will be new and can be misapplied, we are in complete accord with the feeling that investigation of the organization's personnel, experience, facilities, and contacts is entirely justified. A critical condemnation of the entire concept simply on the grounds of the technique involved, we feel, is narrow-minded and defies logical substantiation.

Assuming that the idea of such organization will be given fair consideration, let us detail our ideas to precisely *what* it shall do. "doing" should achieve the maximum in possibilities by virtue of access for cooperative engineering service with manufacturers, airlines and governmental agencies.

Installed as Unit

Its primary activity might consist of the "selling" of production maintenance. To attain the efficiency with the least time expenditure the production system maintenance should be installed a unit. Yet, the capital expenditure involved in such a complete and extensive change in technique certainly removes it from the class of "minor experiments."

Accordingly, our coordinator could analyze the presently applied maintenance procedures from the standpoint of time and cost. In many cases, operators already have the data; yet the check of an independent analyst might reveal some discrepancies, outgrowths of our close-to-the-forest position.

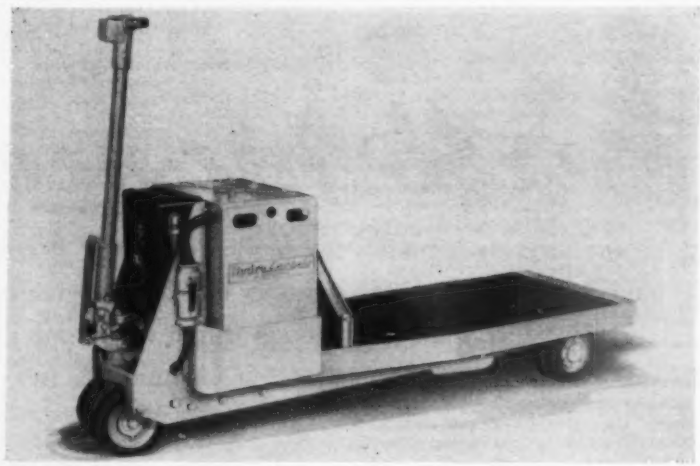
His second function in cooperation with both operator and manufacturer would be an analysis identical to the first in regard to factors considered but this time applying the production methods. A thorough analysis which might be initiated simultaneously with the second, would be more time-consuming would concern itself with the airline's projected future plans and aircraft and parts involved.

The second and third analyses cost-saving in final conclusions would include recommendations. To extent of application of the fundamental change-to-service principle the detailed methods of change and servicing, the design of equipment necessary to do all phases the work and even the space layout for the maintenance areas—all are the recommendations would be needed.

Final Step

Final step in the mutual development would be the installation the entire or partial system at request of the airline. This installation would include the provision all the necessary equipment, since our coordinator has retained his initial function of equipment manufacturer—portable servicing and production-maintenance shop equipment alike.

Since the system would represent a considerable deviation from the present order of the day, the burden of personnel retraining would be great. It is not amiss to assume that the coordinating organization could fill this need as a part of their service. However, the subject of training is a delicate one frequently entwined with other elements in the specific airline organization. Consequently, this factor might assume a varying importance in the case of each operator.



Motorized Lift Truck: Lift Truck, Inc. manufacture the Hydro-electric, the motorized hand lift truck having rear wheel drive and automotive gear transmission with excess motor and battery power. Maximum loads are lifted by hydraulic ram; forward or backward motion is energized through a patented finger control. The manufacturer claims a cost of only nine cents a day for power. Rear load wheel drive insures positive traction and four wheel construction offers stability and safety.

Above we have sketchily outlined our concept of the second approach; the first approach toward obtaining production maintenance, mentioned at the outset, is operator-manufacturer collaboration. Each approach will offer specific advantages in the minds of the operators; of the two, we prefer the second as a specialized yet comprehensive solution of the probem.

Centralization

It centralizes responsibility in an organization whose staff would necessarily include airline personnel. By its same centralization and its comprehensive contacts, it appears reasonable that the overall cost could be reduced below that resulting from the operator thinly spreading his entire maintenance staff over the manufacturing industry.

Further, it includes the necessary functions of equipment design, manufacture and installation. The importance of these factors is increased ten-fold in the production technique. We cannot see that the interface of first-hand information from the manufacturer breeds inaccuracy or inadequacy. As a matter of fact, the incorporation of a third level head in the considerations should *add* to the general effectiveness—especially when the added element has both manufacturing experience and airline knowhow within its own staff.

We have indicated a preference—our idea of how mass production could be applied to air transport maintenance if the airlines are to set as their own service agencies. We'd like to have *your* ideas. It's just as important that we know what you're thinking if you disagree as if you agree. Until both sides of these problems are aired, our job is only half done.

New Bombsight: Shown here in use by its inventor, Norman Greene of Berwyn, Pa., is a new low-level bombsight which has shown excellent precision at 400 feet. The device employs a pendulum to keep the sight at perfect right angles to the ground, a prerequisite for precision hedge-hopping bombing where the bomber path veers considerably. Greene's device, designed and built in his own workshop, is made of scrap metal and employs a calibrated bit of Plexiglas. Its anticipated specific use is in light planes such as used by the Civil Air Patrol.

Equipment Literature

Simmonds Aerocessories, Inc., 10 Rockefeller Plaza, New York, manufacturers of aircraft accessories and hydraulic equipment, has recently published two instruction handbooks regarding its products.

The first deals with the installation and maintenance details of the Simmonds-Corsey flexible aircraft controls. In keeping with the appropriate current trend toward material conservation, the book offers specific instructions to assure best service experience and longest life. The installation and servicing of the Simmonds-Olaer hydraulic accumulators is the subject of the second handbook. The equivalent of the storage battery in an electrical system, the accumulator is used as an emergency or auxiliary source of hydraulic power. The power is divided into seven sections, treating such subjects as: installation instructions, rules for inspection, maintenance and testing difficulties. with their causes and corrections.

•

Equipment and procedure for a new, improved method of degreasing and decarbonizing aircraft engine parts for overhaul are described in a 16-page booklet recently issued by Turco Products, Inc., of 6135 So. Central Ave., Los Angeles. The high speed technique treated and the equipment described were evolved through the collaboration of Turco and aircraft chemists, engineers and technicians.

•

Aero Tool Co., 231 West Olive Street, Burbank, Cal. has just released its fully illustrated catalog for 1942-43 of precision production tools developed in cooperation with the leading aircraft manufacturers. Included in the contents are such items as: angle drills, bushings, countersink equipment, dimpling tools, Erco riveting equipment, rivet sets, etc.

•

A booklet entitled, "Automatic Stress-Strain Recording" has recently been published by the Baldwin Southwark Division of the Baldwin Locomotive Works and should prove useful to engineering and laboratory staffs in the aircraft industry as well as others.

Rules and standards regarding such tests as prescribed by the several branches of the armed services are presented in summary form. Charts and tables illustrating the interpretation of the stress-strain curve accompany another section of the text. The necessary equipment, such as recorders and accessory extensometers, is described and pictured and rules for operation and maintenance of recording devices are set forth.

•

Particularly designed for specification in hydraulic valve and similar applications. two new Davis-made laminated Solenoids are described in a bulletin released by Dean W. Davis and Co., 549 W. Fulton St., Chicago. Coils, it is said in the bulletin, may be paper section wound, cloth taped and treated to assure imperviousness to cutting oils and coolants. Direct or remote control is equally practical and all voltages. A-C or D-C. are available.

•

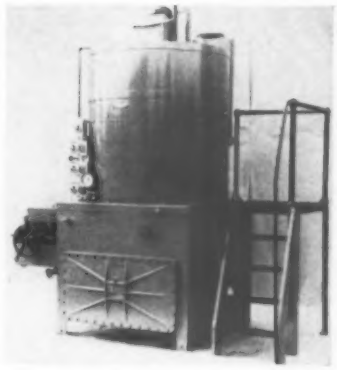
Black Drill Co., 5005 Euclid Avenue, Cleveland, O. has just released a helpful booklet which discusses the properties, applications, proper practices, etc. of their "Hardsteel" line of drills, reamers and tool bits. Illustrations accompany the instructions to assure maximum value of the booklet to users of the products.

Heating Element

Available in any length, yard, foot or inch, a low power flexible heating element, Glasohm may find many uses particularly in limited space. It is a product of Clarostat Mfg. Co., Inc., 285 N. 6th St., Brooklyn, N. Y. In Glasohm construction, the resistance is wound on a fiberglass core and is protected by a fiberglass braided covering. Resulting flexibility permits bending, snug fit and even jamming into very tight spots, it is said. Wattage ratings are from one to four watts per body inch depending upon the specific application. Operating temperatures run up to 750 degrees Fahrenheit.

Cowl Fastener Tests

Nigg Engineering Co., Covina, Cal., announces the results of tests in shear made upon their Cowl Fasteners by Triplett and Barton, Inc. Two sheets of Alclad fastened together with standard Nigg F-7-12 Fasteners were subjected to three successively heavier loads, all above the A-N spec ultimate shear load of 1050 pounds for such a fastener. At 2000 pounds both skin and fastener appeared normal; at 2250 pounds, a slight deformation in the receptacle was noted; at 2500 pounds the skin fractured but the fastener continued to lock and unlock with the same freedom as a new fastener.



Oil Purifier: A product of Youngstown Miller Co., 1636 Hayes Ave., Sandusky, O., the oil purifier illustrated is typical of the units currently in use in the plants of large aircraft and engine manufacturers. Several batch-size units are available, including 55-gallon and 75-gallon. The use of such an equipment item by large scale users of hydraulic oil, as an operating economy, is spreading.

How to get into Aviation—Now

by C. S. (Casey) Jones

NO. 4 in a series of advertisements describing the free training and opportunities now available in aviation. Addressed to the thousands of men and women who wish to prepare themselves for war service in this key industry.

C. S. JONES

One of the most interesting opportunities in aviation, and which provides immediate employment, is offered by the War Training Program of the Civil Service Commission.

If you are 17 or over, a U. S. Citizen, are physically able to work and have two years' high school or equivalent, you may apply for one of the many jobs now open to civilians as employees of the War Department, in aviation.

Under a continuing program, the Civil Service Commission is accepting applications from both men and women who meet above requirements. Men classified 1-A, or persons now employed at their highest skills in defense industries, are not eligible.

Upon passing the aptitude tests, you are given three months' special training in an accredited aeronautics school, and receive pay for this period of $100 per month. You are assigned to one of five courses: *Aircraft Instruments, Aircraft Electrical Installations, Aircraft Sheet Metal Fabrication, Aircraft Propellers and Hydraulics* or *Aircraft Engines.*

After completing the training period successfully, you are employed at a United States Air Depot, at base pay of $125 per month for 40-hour week, with 50% increased rate for overtime. You are employed by the Department of War, but *not* in the Army.

After taking up your duties, you will find ample opportunities for advancement and increased pay in your trade, depending upon your experience and abilities.

For further information, write or call at the U. S. Air Depot, Rome, N.Y., or N.Y. State Education Dept., War Training Program, 20 West 44th Street, New York City.

C. S. Jones
President

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U.S. Lab Steps Up Plane Plywood Research Work

The Forest Products Laboratory of the Department of Agriculture, at Madison, Wis., is expanding its staff "enormously", bringing in technicians from industry, colleges and universities, to meet increased demands from the aircraft industry, Douglas Fir Plywood Association reports.

The trade group announces that Gus N. Arneson, chief of its own research program for six years, has joined the Wisconsin staff as principal technologist, specifically concerned with study of laminated structures, particularly aircraft.

Arneson

Describing the laboratory as the "fountainhead of the government's vitally strategic program of wood utilization," the Association says the results of the government's expanded program is being felt mainly in the Army Air Forces, "where plywood cargo, transport and trainer planes and gliders are now in production, and in other industry where new plywood and wood containers are carrying the material of war to the armed services."

Called significant in the Madison program is increased reliance on plastics and synthetic resins in combination with wood veneers.

The Association, located at Tacoma, Wash., will continue its own research program under direction of Nelson S. Perkins, chief engineer, and J. D. Long, its agricultural engineer. Perkins has directed physical testing studies which are now being published by chapters in the new engineers' handbook titled "Technical Data on Plywood."

The aircraft plywood industry is expected to be able to meet practically all demands this year, although the program has virtually doubled over that of 1942, WPB aircraft specialists in Washington told *American Aviation*. New woods are no longer entering the aircraft plywood field, others are having to be replaced, and a shortage of phenolic resins will complicate the over-all program somewhat this year.

Gum is being used extensively to replace mahogany, no longer imported. Yellow birch, which has been used mainly for the British program, is becoming scarcer, and other woods will have to be used. The industry has adequate capacity to produce aircraft requirements in Douglas fir, however, although there is competition in this wood for pontoon lumber for Army bridges, and ship decking.

Chief retarding agent in the program is the shortage of critical chemicals which go into phenolic resins, the bonding agents for plywood, officials say. Also, vast amounts of standing timber in this country, popularly considered as available at any time, actually can be harvested only a few months of the year because of extreme weather conditions, or not at all because of inaccessible locations.

Although the 1943 program calls for a great increase in wood for shipping, this factor probably will not affect the aircraft plywood industry as much as generally believed because marine plywood is manufactured by other processes with varied resin adhesives.

The War and Navy Departments however, have laid down rigid specifications for wooden aircraft, demanding that any one plane be built entirely of the same wood. Spars and members may be of either wood or metal, but outer plywood surfaces of fuselage, tail and wings must be of the same wood for balance and strength.

A Nationalization Threat

(An Editorial)

EVIDENCE is mounting that Charles E. Wilson, vice chairman of the War Production Board and chairman of the Aircraft Production Board, is an able man worth fighting for. He is the best executive and administrator to appear on the WPB aircraft scene. But evidence is also mounting that he is up against a very tough fight in endeavoring to keep control of aircraft production in civilian hands. If he is to succeed, he needs the support of the aircraft manufacturing industry. He's not getting too much of this support at the present time.

C. E. Wilson admits he doesn't know all the answers—yet. But his admission counts for a great deal, for he's a man who finds out answers speedily. He detests bureaucratic red tape, petty jealousies, and procrastination. At present he stands almost alone against the powerful Army group who want to take over complete control of all aircraft production.

It is evident that some aircraft manufacturers, busily at work far from the Washington scene, are not aware of the implications of complete Army control. Perhaps the most succinct reason why control should be kept in civilian hands is that under Army control "your only customer is also your only court of appeals." Another reason is the lack of experienced production men in the Army. Few of them have any first-hand knowledge of a factory and its problems. A third reason is the potential threat of nationalization once the entire manufacturing processes of aviation are placed under the military. Such a move might well bode ill for the future.

Army control is not the most efficient way of handling production. But if the aircraft manufacturing industry is to avoid such control, it should support an able industrialist in the person of C. E. Wilson. The Aircraft War Production Council on the West Coast has cooperated in trying to work out a satisfactory program. The East Coast council has yet to become familiar with the problems and has yet to exert itself as the strong industrial force which it should be. The Aeronautical Chamber of Commerce internal organization difficulties effectively rule this unit out of consideration as a current spokesman and participant. The automobile manufacturers—far ahead of the aircraft companies in sensing trends and fighting for what they believe is right—are much better organized. The challenge has been laid down by the deep-rooted WPB-Army fight now in progress. Competent observers believe C. E. Wilson is worth fighting with and for.

W. W. P.

Gross Heads AWPC

Robert E. Gross, president, Lockheed Aircraft Corp., Burbank, Cal., has succeeded Harry Woodhead, president, Consolidated Aircraft Corp., San Diego, Cal., as president of the Aircraft War Production Council, Inc. Presidency of the Council rotates every three months among chief officers of the member companies. Woodhead, at meeting of the council's board of directors on Dec. 31, 1942, reported that 10,200 materiel exchanges had been made between member firms.

G. L. Martin Named

Glenn L. Martin, president of the company bearing his name, has been elected president of the Aircraft War Production, East Coast, Inc., succeeding Guy W. Vaughan, president of Curtiss-Wright Corp. J. Carlton Ward Jr., president of Fairchild Engine and Airplane Corp., was named vice president.

Beans to Bombers

"From beans to bombers from pickles to [illegible] planes" has been the program of the H. J. Heinz Co., Pittsburgh food makers, as described by president H. J. Heinz, 2nd, in a recent [illegible] report. Part of the Heinz manufacturing facilities have been converted to the making of plywood wings, fuselages and tail assemblies for planes and gliders.

Aircraft Wage Hearings Cl[illegible]

Hearings before the National [illegible] Labor Board in Washington, [illegible] uary 8 and 9, on West Coast [illegible] dustry wage stabilization, were [illegible] cluded abruptly and the whole [illegible] ter was referred immediately to [illegible] Board for an executive decision.

Paul R. Porter, WPB press [illegible] officer of the wage conference, [illegible] previously on the West Coast, [illegible] delayed in the final preparation [illegible] his report, upon which the hearings were based. As a result, some [illegible] tions of the report were submitted to the Board only a day or [illegible] before the scheduled hearing. [illegible] Labor spokesmen contended, [illegible] sequently, that management had [illegible] access to the report, whereas [illegible] had not.

The hearings were indefinite [illegible] character, being for the most [illegible] a repetition of claims and [illegible] ments made in former testimony. [illegible] Labor leaders insisted that Porter's report and suggested directive [illegible] the industry was based upon management's recommendations. [illegible] Stewart Neary, counsel for the manufacturers, denied this, stating the Porter's recommended pay increase was over three times the increase approved by management. He explained that the industry would [illegible] along with Porter's suggestions [illegible] only the three lowest grades.

Further contention was aroused over the job evaluation program through which management expressed the hope to set a fair wage rate for workers according to skill and job classifications.

As the hearings ended, there was no indication of a settlement that would be acceptable to both parties to the controversial issue and the Board's final decision will be awaited with interest. It is felt that Porter's recommendations are approved in toto, neither faction will be satisfied. On the other hand any change can only lead to further dissension.

Rearwin Renamed

Commonwealth Aircraft, Inc., is the new name of Rearwin Aircraft and Engines, Inc., Kansas City, Kan., as recently announced. Corporate organization and officers remain the same as before, and company continues to build gliders on a [illegible] basis.

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merican Propeller To Up Capacity 50%

Purchase of additional machinery d equipment will enable it to in- ase plant capacity 50%, Ameri- Propeller Corp., Toledo, O., olly-owned subsidiary of The ation Corp., New York, N. Y., announced.

stallation of this equipment, pany claims, will make it "the est hollow steel propeller blade nufacturing plant in the coun- " Production of this type of peller blade, which is used on S. AAF bombers, "has increased sistently every month since the t was completed this summer shipments are now approxi- ely two months ahead of sched- " December output was de- ibed as "40% greater than for the th of November."

Made from a single piece chromium-nickel-molybdenum, erican Propeller hollow steel ies are said to "have greater stance to corrosion and abrasion in the larger sizes are lighter weight than aluminum."

DPC Authorizations

mong recent contracts and in- ases in contracts authorized by ense Plant Corp., RFC subsidi- , were increase in contract with ted Aircraft Corp., East Hart- d, Conn., for further expansion a plant in Connecticut, which make total commitment for this pose more than $2,300,000; con- t with American Central Manu- uring Corp., Connersville, Ind., plant facilities in Indiana, to cost xcess of $150,000, and increase in tract with General Motors Corp., roit, Mich., for further expansion a plant in Michigan at a cost of re than $900,000, which will re- in total commitment on this ject of more than $2,500,000.

lso authorized were: increase in tract with Aviation Corp., New k, N. Y., for additional plant ilities in Ohio, costing more than 0,000, making over-all commit- nt for this purpose of more than 500,000; increase in contract with led Power Corp., Muskegon, ch., for additional plant facilities Michigan, which will increase to re than $2,000,000 authorizations this need; increase in contract h American Bosch Corp., Spring- d, Mass., for additional equip- nt in a plant in Massachusetts, cost more than $350,000, which make total commitment of over 00,000, and increase in contract h General Electric Co., Schnec- y, N. Y., to provide more equip- nt in a plant in New York state, cost in excess of $1,200,000 result- in over-all commitment of more n $2,500,000.

each of these authorizations, C retains title.

ANADIAN CAR AND FOUNDRY Co., Montreal, Que., reveals net profit 958,384, or $3.42 each on 280,000 es of 7% cumulative participating ferred stock, for the fiscal year d Sept. 30, 1942. This compares with profit of $701,886, or $2.51 in the ding year. During the 1942 year, 0,000 was provided for income and s profits taxes.

British Press Service.

The Mosquito: Above is a new picture of the Mosquito, the RAF's twin-engined reconnaissance bomber, the first operational type to be developed by the De Havilland design office since World War I. It has two Rolls-Royce engines and is of wooden construction, which lends itself to widely dispersed manufacture, the British state.

132 Years of Service: A total of 132 years of service in the aircraft industry, or an average of 26 2/5 years per man, is represented by these five men who recently attended the meeting of the directors and the production committee of the Aircraft War Production Council, East Coast, Inc., at Bell Aircraft Corp.'s plant. Left to right: Lawrence D. Bell, president and general manager of Bell Aircraft Corp., 30 years' service; W. A. Bates, vice-president of Brewster Aeronautical Corp., 25 years; Lester L. Benson, works manager of Bell, 24 years; C. A. Van Dusen, president of Brewster, 28 years, and T. B. Soden, factory manager of Glenn L. Martin Co., 25 years.

Polish Job: Plexiglas nose assemblies for Douglas attack bombers receive their final polishing before installation. Rows of ceiling lights reflected in the assemblies show how well the women workers are doing their job. Plexiglas was developed by Rohm & Haas Co., Philadelphia. Company claims it is more transparent than glass and less than half as heavy.

Chance Vought, Sikorsky Aircraft Are Re-established

Chance Vought Aircraft division and Sikorsky Aircraft division have been reconstituted as separate manufacturing divisions, succeeding Vought-Sikorsky Aircraft division of United Aircraft Corp., East Hartford, Conn., according to United Aircraft's announcement.

Re-establishing of these two units, combined into Vought-Sikorsky Aircraft in 1939, will enable Chance Vought to expend its energies on development and production of combat aircraft. Sikorsky Aircraft division will work on the development of the helicopter for both military and commercial purposes.

Igor I. Sikorsky continues as engineering manager of the Sikorsky Aircraft division, and Rex B. Beisel has been named in the same capacity in the Chance Vought Aircraft division. Charles J. McCarthy, general manager of the former Vought-Sikorsky Aircraft, will continue to direct the operations of the two new divisions. Administrative and manufacturing facilities of the former corporation will be used.

Mfg. Digest

GOODYEAR TIRE AND RUBBER Co., Akron, O., has announced that its new flexible aviation engine mounts to cushion engines on rubber are being adapted to Army training planes. Company's engineers claim the new mounts will lessen vibrational stress, provide greater fire precision and more accurate aiming of bombs, and reduce vibration-inspired nervous strain on pilots. Quantity production is scheduled to start within a short time. Company also reports tests are being conducted by the U. S. AAF to determine the possibility of using another cushioning method for engines of heavier military planes.

WRIGHT AERONAUTICAL Corp., division of Curtiss-Wright Corp., New York, N. Y., has constructed its sixth plant, "somewhere in New Jersey," according to press report. Plant is described as being so large it will have its own indoor highway system and "work villages" for new employes. A new method of pouring concrete during the construction period was said to have speeded building time.

PRODUCTION AWARDS recently announced include the following companies selected to receive the Army-Navy Production Award: The Black and Decker Mfg. Co.; Butler Mfg. Co.; Electronic Laboratories, Inc.; Ford Motor Co., Aircraft Engine Division and Michigan Seamless Tube Co.

NASH-KELVINATOR Corp., Detroit, Mich., is reported to have scheduled early reopening of its Seeman body division, which will make precision parts for Pratt and Whitney aircraft engines. This plant, which formerly made automobile bodies, has been closed since Jan. 30, 1942.

Interstate Now Makes Plane Of Own Design

Rapid growth of Interstate Aircraft and Enginering Corp., El Segundo, Cal., has been reflected in recently announced personnel changes. From producing small aircraft parts when it started in 1938, Interstate has progressed to its present status as an important maker of precision units and complete military planes of its own design.

As announced, W. E. Hirtensteiner becomes executive vice president; Walter A. Hite, vice president in charge in engineering, is elected a director; Lawrence J. Lay is promoted to the newly-created position of vice president in charge of the El Segundo division; Lawrence A. Kavanaugh, formerly contract administrator, is advanced to executive assistant, with headquarters in the Wilshire office; F. L. Holser, formerly staff assistant, has been made plant manager of the Wilshire division; M. E. Landry replaces W. E. Arrain as superintendent in charge of aircraft at Wilshire, and Arrain becomes factory manager of the Illinois plant.

Interstate now operates two plants in California and one in Illinois, which was formerly the Arlington Furniture Co. factory, boasting the longest furniture assembly line in the world. Besides planes, the firm makes bomb shackles, machine gun and cannon chargers, and hydraulic units. In addition to a major organ and piano manufacturer, and a former sewing machine firm, Interstate has as sub-contractors a group of New York state furniture makers, which formed the American Aviation Corp., at Jamestown, N. Y.

Besides the executives already named, other members of Interstate's board of directors are: L. B. Cameron, also secretary and treasurer; Hugh W. Darling, of the firm of Guthrie and Darling, legal counsel for Interstate, and George Castera.

Mass Production: One of the best mass production photos of the war is this one of Consolidated Aircraft Corp.'s Texas plant. The assembly line in the foreground contains B-24 Liberator bombers in process of modification, marking what Consair says is the first time mechanized assembly line techniques have been applied to the work of equipping heavy bombers with their "fighting extras." The background line, filled with C-87 transports, is said to be the longest straight mechanized assembly line in operation in the aircraft industry. Only a "small portion" of the factory is shown in the picture, the company says.

Former Management of Brewster Sued

Brewster Aeronautical Corp. has filed a new suit in Supreme Court, New York, against the former management of the company, seeking recovery of $3,200,000 paid in commissions to the Brewster Export Co. and Hayes Aircraft Accessories Corp.

Also sought was an order exempting Brewster from payment of an additional $2,000,000 due to Brewster Export.

The Court reserved decision on a motion to consolidate the suit with an earlier suit brought by minority stockholders.

Consair Adds Parts Unit and Assembly Line Modification

Establishment of a new assembly line for modification of the four-motored B-24 Liberator bomber, and near-completion of a $14,000,000 parts building which will furnish components for the Liberator and C-87 Liberator transport adaptation in its Texas division, has been announced by Consolidated Aircraft Corp., San Diego, Cal.

Aimed at speeding preparation of the Liberator bombers for combat, "latest production methods" are being applied in readying these ships "for special tactical missions anywhere in the world" . . . ranging from "desert pink" for North African duty to special oxygen, heating and ignition installations for all-purpose flight on special assignments.

Addition of the new parts building to the Texas group will make possible manufacture and assembly of all components of both the B-24 and C-87 within the same lay-out.

According to the Company, "Originally the Fort Worth Division was set up to assemble Consolidated's Liberator bombers from parts which were to have been supplied by Ford's Willow Run factory. But when the Fort Worth plant turned out its first plane 100 days ahead of schedule last April, using parts produced in Consolidated's San Diego plant, it became evident that production demands would necessitate the Fort Worth Division's supplying its own parts."

Counter-Rotati Propeller Test

"First flight in the world feathering counter-rotating pr ler" of the constant speed type by the Hamilton Standard P lers Division of United Corp., East Hartford, Conn., cently announced.

This blade, 12 feet in di consists of two three-bladed pellers, mounted one behind other on co-axial shafts and by one engine. One propeller clockwise, the other counter-cl wise.

Company claims "use of counter-rotating propeller three basic problems. It give creased blade area without creased breadth or length. It moves the torque reaction, or ing effect, developed by a propeller rotating in one dire The handicap of this torque tion is particularly great in small, high-speed, fighting p operating at high altitudes. A tain amount of rotational energ the slip stream of the front peller is also recovered by the ond propeller and converted useful work and the slip straightened out to lessen resi to the planes."

Transamerica Corp. Acquires Control Of Adel Precisi

Transamerica Corp. has acqu control of Adel Precision Pro Corp., Burbank, Cal. on the of one and 5/100ths Bank of ica N. T. and S. S. common for each nine of Adel's shares of stock, according to nouncement.

Terms of the new arrangeme clude signing of five year ma ment contracts with H. Ray K wood, president of Adel, and ert D. Cavanaugh, vice-presid Finance. New board consists of inwood, Cavanaugh, W. L. Andr vice-president and treasurer Transamerica, Charles H. Schi assistant vice-president of Tr america, and William De R president of General Metals Co

Besides Adel, Transamerica trols Aerco Corp., Los Angeles aircraft parts makers. Adel is sidered by Transamerica as "a sential part of a group of comp possibly to be expanded which also have considerable potentia in the production of post-war pe time goods."

Solar Reports $323,796 Prof

Net income of $323,796.34 for six months ended Oct. 31, 1942 shown on the semi-annual repo of Solar Aircraft Co., San Dieg Cal.

Net sales currently totaled $1,261,316.70, a considerable increa over the rate for the fiscal y ended April 30, 1942.

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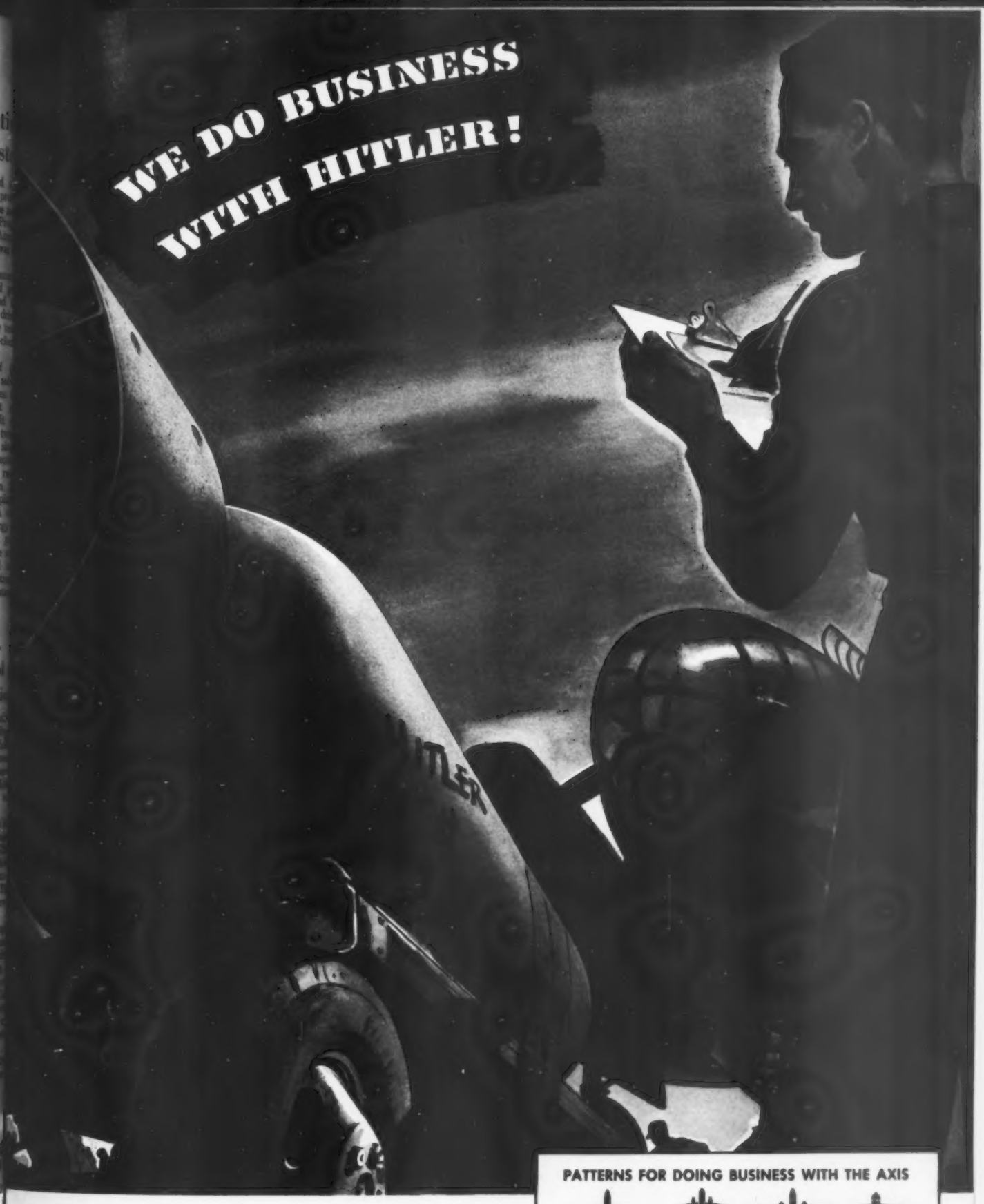

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Raymond W. Christensen succeeds **Randolph M. Snow** as advertising manager of Young Radiator Co., Racine, Wis. Snow was commissioned a lieutenant in the Navy in December.

W. D. "Dave" Robson succeeds **D. J. "Dan" Caliendo** as chief of estimating and scheduling in the Tennessee division of Vultee Aircraft, Inc., Vultee Field, Cal. Caliendo was promoted to chief of production.

George L. Lang has been named assistant plant manager of the Indiana plant of Curtiss-Wright Corp., Propeller Division, Caldwell, N. J.

Piper Aircraft Corp., Lock Haven, Pa., has announced the following promotions: **Handford E. Eckman** from plant superintendent to plant manager; **Findley A. Estlick** from assistant plant superintendent to general plant superintendent, and **Richard C. Barber** from division head to assistant plant superintendent.

A. C. Galbraith, formerly a partner in the firm of Galbraith and Wells, Los Angeles, Cal., personnel management counselers, has been appointed manager of employe counseling for all plants of Douglas Aircraft Co., Inc., Santa Monica, Cal.

Archibald Black has been appointed chief draftsman for Simmonds Aerocessories, Inc., New York, N. Y.

James W. Harley succeeds **George F. Hichborn** as director of traffic at United States Rubber Co., New York, N. Y. Hichborn continues in an advisory capacity.

Ernest Koster has resigned as director of purchases of the Ranger Aircraft Engine division of Fairchild Engine and Airplane Corp., New York, N. Y. He has made no announcement of his future plans.

J. D. Shaw, formerly research and production engineer with Metals Disintegrating Co., is now chief powder metallurgist with Aircraft Parts Development Corp., Summit, N. J.

Charles J. Durban becomes assistant director of advertising for United States Rubber Co., New York, N. Y. He will continue to supervise all tire advertising.

Carl F. Lozon is now assistant works manager in charge of operations in one of the divisions of Bell Aircraft Corp., Buffalo, N. Y.

Harry A. Shaffer, who resigned recently as president of Northwest Aeronautical Corp., Minneapolis, Minn., has been named adviser to the aviation division of the Ward Furniture Mfg. Co., Fort Smith, Ark., which assumed glider contracts formerly held by Cessna Aircraft Co., Wichita, Kan.

Recent changes at Kinner Motors, Inc., Glendale, Cal., include: **Gunnar Edenquist,** formerly sales manager, has been selected vice president and assistant to the general manager; **Walter C. Milka,** production manager, has been elected vice president in charge of production; **Jack Kuhn,** formerly assistant chief engineer, succeeds **Charles P. Sander,** resigned, as chief engineer, and **Kenneth Weiser** has been promoted from member to head of the service department, with the title of service manager.

Weiser Edenquist Kuhn Milka

Houdry Announces New Process for Super Aviation Fu

A new catalytic process fo ducing high octane aviation which will give added pow presently designed aircraft e and make possible more po engines in the future, has be nounced by the Houdry Corp., Wilmington, Del.

Essentially an adiabetic c cracking method, which stepped up fuel from heavy pe this new procedure can be in refineries which will smaller amounts of critical m and time and cost of const can be reduced, as compared usual current techniques. Houdry's engineers were s last year for a method of butadiene, main ingredient of S Synthetic rubber, they dev this cracking operation.

After tests were made of ad catalytic cracking in a pilot announcement reports that en ing and construction of comm units are already under way. pany claims that the catalytic ing principle has played an i tant part in the war to date that in addition to 16 Houdry c tic crackers operated by four oil companies last year, 11 add units are now being construct processing of aviation fuel.

E. C. Wells Wi '42 Sperry Aw

Selection of Edward C. W the Boeing Aircraft Co., Se Wash., to receive the Law Sperry Award for 1942 has be nounced by the Institute of Aeronautical Sciences, Inc., York, N. Y.

Wells

Award ries with citation "i outstandi contributions the art of plane desi with spec reference four engi aircraft," an honorar of $250. It presented nually by the brothers and si of the late Lawrence Sperry, pio aviator and inventor, "for ne accomplishments by young men the advancement of aeronautics."

Wells, assistant chief engineer Boeing, has contributed to the des and development of the B17 since earliest types, and is credited the exhaust driven turbo-sup charger installation of this plane.

Members of the committee wh chooses recipients of this award a Maj. Gen. James H. Doolittle, U. AAF; Lester D. Gardner, executi vice president of the Institute of Aeronautical Sciences; Charles Lawrence, aircraft engine designe Grover Loening, consulting ae nautical engineer; Glenn L. Mart President, Glenn L. Martin Co., a Elmer A. Sperry, Jr., vice presid of Sperry Products, Inc.

Ack-Ack guns that "see, hear, and think"

MEN who man our anti-aircraft batteries swear that their ack-ack guns can "see, hear, and think." Here's why:

In case of a night air raid, the first ears to hear the enemy bombers are mechanical ones in the Sound Locator developed and continually improved by Sperry. Far more sensitive and reliable than human ears, they can locate enemy planes while they are still many miles away and determine their exact position and the direction of their flight.

When the "ears" have found the planes, the "eyes" of the ack-ack guns take over. A battery of 800 million beam candle-power searchlights, the most powerful in the world, spotlights each enemy raider *automatically*. So brilliant is the light of this Sperry invention that a man miles away can read a newspaper by it.

While the reaching finger of the searchlight follows the plane across the sky, the "brain" of the guns goes to work. This is another Sperry device, the Universal Director.

Working many times faster than the human mind, this uncanny instrument calculates firing data and transmits them to the anti-aircraft guns electrically. Then a Sperry power-control mechanism automatically positions the guns on the target.

The last act in this amazingly swift-moving drama comes when the men slam home the shell and press the firing lever. Which they do. And enthusiastically!

Creating "eyes, ears, and brains" for anti-aircraft guns is but one of the many ways in which Sperry is co-operating with our Army and Navy, and helping through precision engineering to solve the problems of a nation at war.

Sperry Gyroscope Company, Inc.
Brooklyn, New York
Division of Sperry Corporation

SPERRY

PRECISION ENGINEERS TO AMERICA

XUM

MANUFACTURING

WACO AIRCRAFT Co., Troy, O., discloses it had for the fiscal year ended Sept. 30, 1942 net profit of $133,759, equal to 92c each on 145,000 shares, common, against $192,107 net profit or $1.32 a share in the 1941 year. Net sales for the 1942 period were $2,160,067, against $2,812,640 a year previously.

LIBERTY AIRCRAFT PRODUCTS Corp., Farmingdale, L. I., N. Y., discloses net earnings of $874,258 for the fiscal year ended Nov. 30, 1942, equal to $4.37 each on 200,000 shares, common. A post-war adjustment reserve of $500,000 was deducted before net. Improved earnings reflect substantial increases in sales, according to report.

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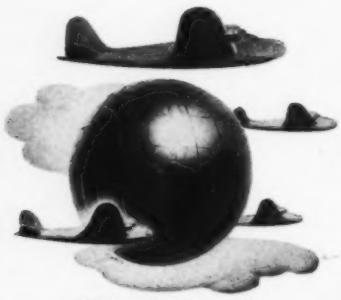

The Voice of AVIATION

Radio and Aviation have grown hand in hand—dependent on one another! Pioneers in both fields realized that successful aircraft operation, in peace or war, demands efficient *communications*. Frank Melville has given his time and energy to the development of Melville Aeronautical Radio School because he foresaw that the nation would need a dependable source of training men and women in radio communications for America's planes—first for Victory, then for Progress.

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Times That Try Men's Souls

One reason why aircraft manufacturers have a hard time keeping sane:

A large western aircraft plant was beginning to lose some of its best power plant engineers to the draft and was trying to convince a Washington official that these men should be classified as essential. The official was adamant against deferments.

"Why, you can get boiler nurses anywhere", he said.

It turned out that the official was a former dry goods merchant, thought power plant engineers were unskilled boiler room men instead of being among the highest specialized engineers in the world. Lucky for the company it had a man on the spot in Washington.

Canada to Produce 9 Plane Types in '43, Howe Reveals

A "vastly expanded production program of nine selected types" of aircraft, 50% of which will be combat planes and will be flown abroad, has been projected for Canada during 1943, according to C. D. Howe, Munitions Minister.

Howe revealed that since June, 1940, the Canadian aircraft industry has produced 6,500 planes, 5,000 of which were used in Canada as trainers in the Joint Air Training Plan. All of the remaining craft, combat planes, were sent abroad to various war points.

During 1942, aircraft production was described as two and one half times that of the previous year despite expansion and design changeover difficulties. Types manufactured comprised the Mosquito bomber; Lancaster bomber; Curtiss dive-bomber; Catalina patrol ship; Fairchild Cornell primary trainer; Harvard single-engined advanced trainer; Bolingbroke, twin-engined medium bomber used for advanced training, and the Noorduyn Norseman, the only wholly Canadian designed aircraft, a single-engined transport. During the current year, models of the Anson, twin-engined trainer, are scheduled to come into production.

From only 1,000 workers in the war to a current figure of more than 75,000, Canada's aircraft industry has grown, and more than 21,000 women are presently employed. When peak production is reached, more than 100,000 will probably be active in this work. According to Howe, expansion has been so rapid in some instances that certain individual production schedules have been doubled, tripled and even quadrupled.

Financial Briefs

NORTHWEST AIRLINES, Inc., St. Paul, Minn., reports for the quarter ended Sept. 30, 1942, net income of [illegible]. Total operating revenue was $1,[illegible] and total operating expenses $980,[illegible].

NASH-KELVINATOR Corp., Detroit, Mich., announces it had for the [illegible] year ended Sept. 30, 1942, net profit of $3,828,755, equivalent to 89c each on 4,291,202 shares, common, compared with net profit of $4,617,052, or $1.07 a share previously. Total income in the period, including sales and dividends from other companies, amounted to $[illegible]704,596. Costs, expenses and other charges totaled $76,290,841, income taxes were $1,680,000, and Federal excess profits its taxes were $1,905,000. In the year, net sales were $122,045,29[illegible].

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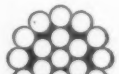
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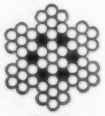
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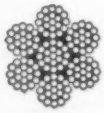
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In order to open up this new superhighway of the air, Boeing engineers designed the first cabin with automatically controlled atmosphere-conditioning. Thus at 20,000 feet, where the bitter-cold air is too rarefied for sustained breathing, the atmospheric "altitude" inside the Stratoliner is maintained at a level at which passengers and crew are comfortable. That's why the Stratoliner represents the greatest advance yet reached in the design and manufacture of commercial airplanes . . . and a guide-post to the future of flight.

Today, Boeing Stratoliners have discarded their gleaming mufti for drab camouflage, and employ their great speed and huge load capacity on errands of war . . . shuttling across seas and continents, hurrying men and materials out to the front lines.

And in another way, too, the Stratoliner is helping to win the Battle of the Skies . . . supplementing the work of another Boeing-designed and Boeing-built airplane—the Flying Fortress.* For the engineering and manufacturing lessons learned in building the Stratoliner and the Fortress are today being applied to creating still better military planes.

The engineering and production know-how acquired by Boeing in many fields—structural, electrical, metallurgical, aerodynamic and many others—this know-how will some day be converted . . . from making America victorious, to making the fruits of science and industry available to free men everywhere.

Engineering leadership . . . manufacturing efficiency . . . now and tomorrow, these are implicit in the phrase "Built by Boeing."

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On the Labor Front

BELL AIRCRAFT CORP., Buffalo, N. Y.
Dispute with UAW-CIO is certified to NWLB. Demands include closed shop, general wage increase of 15c an hour, military severance pay, change in vacation plan, change in grievances procedure and seniority.

CANNON MANUFACTURING CORP., AND CANNON ELECTRICAL DEVELOPMENT CO., Los Angeles, Cal.
Directed by NLRB to hold election for maintenance and production employes to vote for UER&M-CIO, for Cannon Employes Association, or neither.

CHRYSLER CORP., Detroit, Mich.
NLRB certifies UAW-CIO for plant protection employes at Highland Park plant.

CONSOLIDATED AIRCRAFT CORP., Modification Center, Tucson Division
Directed by NLRB to hold election for production and maintenance employes to vote for or against representation by IAM-AFL.

CURTISS-WRIGHT CORP., Buffalo, N. Y.
Company signs contract with Associated Welders of Western New York, granting the unaffiliated union maintenance of membership and other non-cost items. Questions of wages, job classifications, shift premiums and retroactive pay to June are before NWLB in Washington. Board gave a hearing at the same time to wage demands of IAM-AFL for production and maintenance workers at the Buffalo plants.

EASTERN AIRCRAFT DIVISION, GMC, Trenton, N. J.
Employes have approved a new wage schedule giving minimum wage of 76c an hour and maximum for the highest paid classification at $1.80.

FORD MOTOR CO., Detroit, Mich.
A strike that lasted several days at the Rouge plant and threatened aircraft engine production ended at order of AAF supervisor in Detroit area.

FORD INSTRUMENT CO., Long Island City, N. Y.
Company has reached an agreement with UER&M-CIO for increases averaging 7½c an hour for all employes. Approved by NWLB.

GOODYEAR AIRCRAFT CORP., Akron, O.
NLRB certifies Pattern Makers League of North America-AFL for wood, metal and plaster pattern makers.

HAYES MANUFACTURING CO., Grand Rapids, Mich.
NWLB has approved wage increases for employes of aircraft division for raise of 8c an hour. Also approved a wage incentive plan for parachute workers to increase average straight time hourly earnings about 20% to 65c an hour.

HUDSON MOTOR CAR CO., Detroit, Mich.
Voluntary wage increases in 53 classifications are rejected by the regional NWLB offices in Cleveland; however, increase in vacation grants is allowed.

HUGHES TOOL CO., Houston, Texas
NLRB certifies as agents for Polishers, Metal Polishers, Buffers, Platers and Helpers-AFL; for hourly and piece work employes, Scale Workers of Ohio, Inc.

AIRCRAFT PARTS MANUFACTURING DIVISION, KROEHLER MFG. CO., Inglewood, Cal.
NLRB certifies IAM-AFL as bargaining representatives for production and maintenance employes.

MURRAY CORP. OF AMERICA, Detroit, Mich.
NWLB has approved wage agreement with UAW-CIO providing for wage increases similar to those granted to Chrysler, Briggs and GMC in previous Board decisions.

NASH-KELVINATOR CORP., Lansing, Mich.
Propeller plant's agreement with UAW-CIO for wage increases of 4c to 17c an hour approved.

WRIGHT AERONAUTICAL CO., Paterson, N. J.
Foundry workers strike but do not hold up production of other departments. Unless settled, the dispute is marked for certification to NWLB.

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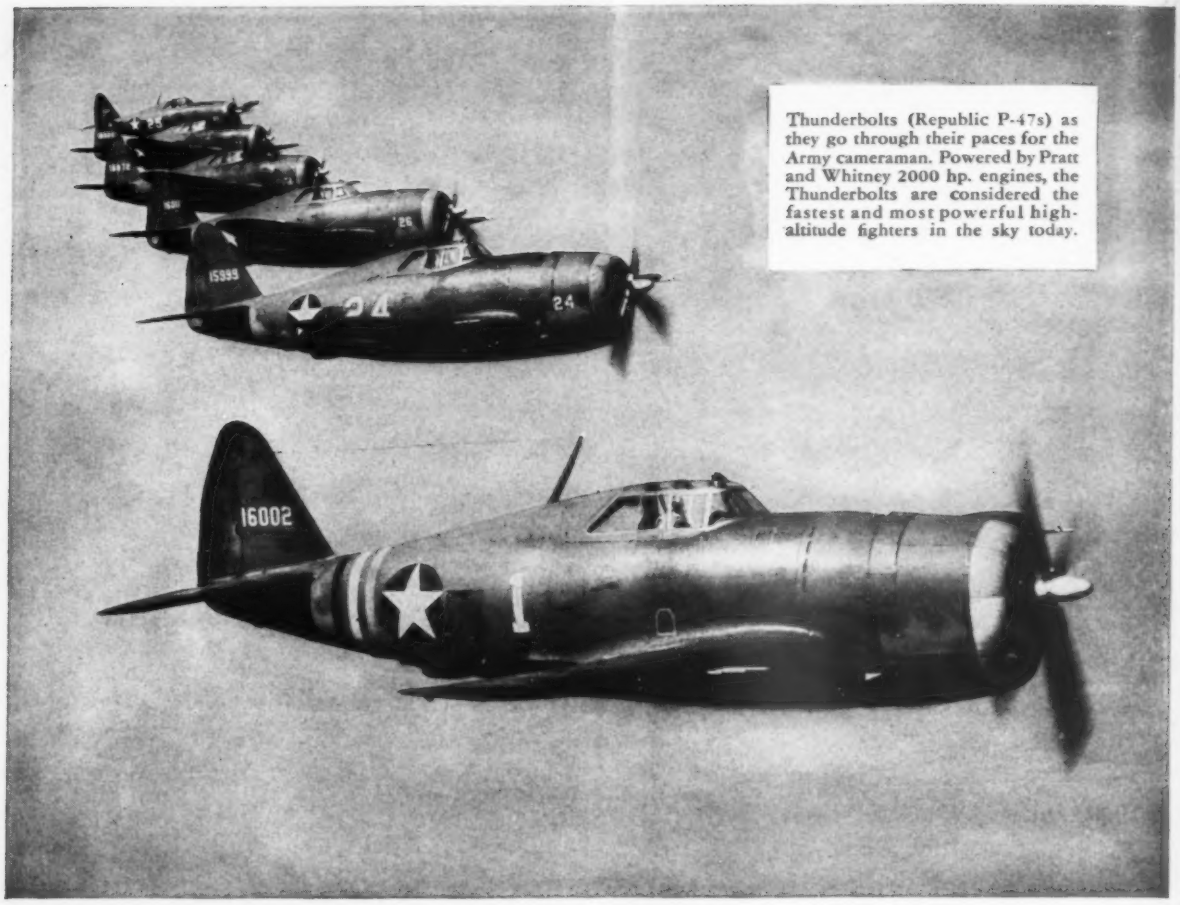

Thunderbolts (Republic P-47s) as they go through their paces for the Army cameraman. Powered by Pratt and Whitney 2000 hp. engines, the Thunderbolts are considered the fastest and most powerful high-altitude fighters in the sky today.

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